THE BRITISH JOURNAL
OF
DERMATOLOGY
SEPTEMBER 1952

RED LINEAE DISTENSAE.

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Red or purple lineae distensae have provoked interest for many years since first described by Wilks (1861). There have been several reports of small numbers of cases in various diseases (Parkes Weber, 1917, 1926, 1928, 1935 ; Rolleston and Goodall, 1931 ; Ebert, 1933 ; Rosenthal, 1937), and one larger series in patients with tuberculosis (Hurford and Snell, 1943). Coloured lineae have been known as a feature of Cushing's syndrome for many years (Cushing, 1932), and also of pregnancy and adolescence. Recently they have received increased attention since the demonstration that they occur during treatment with cortisone (Sprague *et al.*, 1950).

Several causes of the lineae have been suggested : stretching ; from posture ; increase in weight or in height ; malnutrition of the skin ; actions of toxins ; and most authorities attribute them to these acting together (Hurford and Snell, 1943 ; Rolleston and Goodall, 1931 ; Parkes Weber, 1917, 1928 ; Price, 1950 ; Ormsby and Montgomery, 1948 ; Macleod, 1933). Stretching combined with weakening of the elastic tissue due to endocrine imbalance was suggested as the cause by Ebert (1933). Alessandri (1931) also suggests an endocrine background. More recently following the work of Sprague *et al.* (1950), it has been suggested that the presence of red or purple lineae distensae in any condition is evidence of adrenal cortical overactivity (Simpson, 1950).

The present investigation has already been briefly reported (Crofts and Macrae-Gibson, 1950) ; more complete details are now presented.

Material.

The 92 patients (56 men and 36 women) in the pleural effusion unit of Queen Mary's Hospital, Sidcup, were examined. They were suffering from presumably tuberculous conditions, the criteria being : the history, x-ray appearance, positive Mantoux test, often typical pleural fluid in some cases positive

for tubercle bacilli, and frequently contact with a tuberculous case ; no sputum-positive cases were accepted. The actual lesions were : pleural effusion, 86 ; minimal parenchymatous lung lesion, 9 ; ascites, 4 ; cold abscess of rib, 1 ; miliary tuberculosis with meningitis treated successfully, 1. Some patients had more than one lesion. They ranged in age from 14 to 43 years.

Incidence.

Red or purple lineae were present in 39 patients (41·8%). Their conditions were : pleural effusion, 36 ; ascites, 1 ; cold abscess of rib, 1 ; primary lesion of lung, 1. There were 23 men and 16 women, so that the sex incidence was approximately equal (41% men and 43% women).

Most of the patients with lineae were not more than 21 years old, and in them the incidence was 62% (33 out of a total of 53 patients). In patients over 21 years the incidence was 15% (6 out of 39 patients). Although the numbers are rather small the graph shows the maximum incidence at 16-17 years and thereafter a steady fall (Fig. 1).

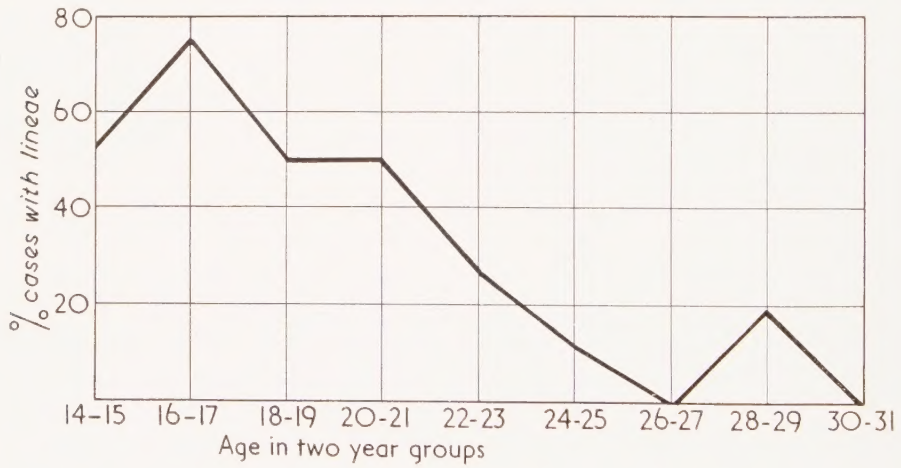

Fig. 1.

It was soon apparent that there was an obvious relationship between the rate of gain in weight and the presence or absence of lineae. Patients with lineae showed an average gain of 4·7 lb. per month (men 4·3 lb., women 5·25 lb.), and those without, of only 2·2 lb. per month (men and women equal). No patient gaining weight at the rate of 1·25 lb. per month or less showed lineae. Patients of 21 years and less showed a higher average gain than older patients, but even in this group those without lineae gained an average of only 3·9 lb. per month. Once again, although the numbers are small a graph

demonstrates the trend of increasing incidence of lineae with increasing weight gain (Fig. 2).

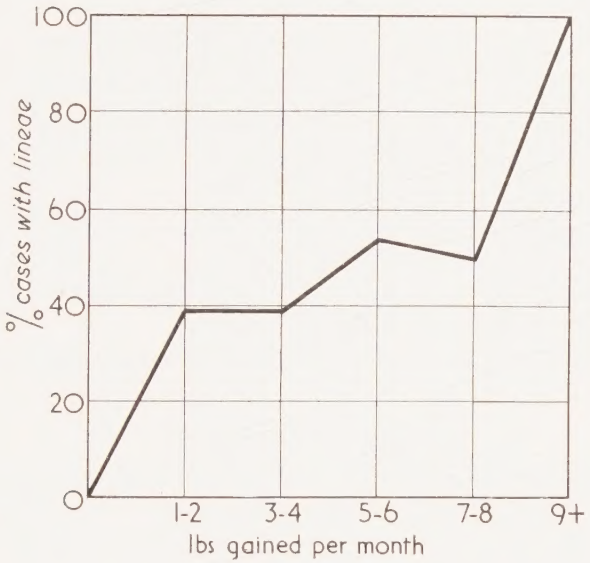

FIG. 2.

Description of Lineae.

The lineae were red or purple, depressed, smooth and painless, elliptical or irregular in shape, $\frac{1}{8}$ to $\frac{1}{2}$ in. broad in the centre and usually several inches long; they lay in the lines of skin cleavage and transversely to the line of greatest tension.

In men they were chiefly on the back in the dorso-lumbar and sacral regions and on the sides of the upper parts of the thighs; in women more on the hips and buttocks, and in some cases on the breasts; these patients spontaneously commented on the increase in size of their breasts.

In no cases of ascites were lineae present on the abdomen.

In ten cases lineae were unilateral but they showed no relationship to the site of disease.

TABLE I.—*Sites of Lineae in Men and Women.*

Site.	Men.	Women.
Dorso-lumbar	9 cases	2 cases
Sacral	5 ,,	—
Buttocks	2 ,,	4 cases
Hips	—	6 ,,
Thighs	17 cases	5 ,,
Sides of abdomen	—	3 ,,
Breasts	—	3 ,,

State of Disease.

The actual date of onset of the lineae was not definitely known, but in most cases they appear to have first developed after the end of the acute stage of the illness and while the patient was still at almost complete rest in bed. They were red for about three months, fading through reddish purple to purple for up to a year ; their subsequent course could not be determined in the present investigation.

There was no difference in the progress of the disease or the prognosis given in the groups with or without lineae.

There were no other skin lesions except two marked and three mild cases of acne ; these were divided between the two groups.

None of the women showed any notable abnormality in menstrual history.

Biochemical Investigations.

The nine patients with lineae in one male ward and nine control cases from the same ward who differed clinically in no great degree (see Table II) were investigated fully. Serum sodiums and potassiums, fasting blood sugars, urinary 17-ketosteroid excretions and eosinophil counts with adrenalin response were done, and in five cases 3-day fluid balances (Tables III, IV, V and VI). One biopsy of skin is also reported.

TABLE II.—*Clinical State of Cases and Controls.*

Cases.	Age. (years).	Disease.	Onset of disease.	Activity allowed.	B.S.R.	Colour of lineae.
1	17	Right pleural effusion	4 months ago	½ toilet	10 mm.	Red
2	16	Left ,,	5 ,,	7 hours up	4 mm.	Reddish-purple
3	19	Right ,,	10 ,,	5 ,,	13 mm.	Purple
4	15	Ascites and left pleural effusion	4 ,,	½ toilet	3 mm.	Red
5	16	Left pleural effusion	4 ,,	,,	20 mm.	Reddish-purple
6	16	,, ,,	4 ,,	10 hours up	6 mm.	Purple
7	19	Right ,,	4 ,,	6 ,,	1 mm.	Red
8	21	,, ,,	7 ,,	7 ,,	10 mm.	Reddish-purple
9	16	,, ,,	6 ,,	6 ,,	2 mm.	,,
Controls.						
a.	21	Bilateral ,,	5 ,,	½ toilet	10 mm.	
b.	21	Right ,,	5 ,,	Full toilet	4 mm.	
c.	24	Left ,,	4 ,,	½ toilet	12 mm.	
d.	21	,, ,,	6 ,,	4 hours up	2 mm.	
e.	16	,, ,,	5 ,,	8 ,,	3 mm.	
f.	23	,, ,,	6 ,,	10 ,,	6 mm.	
g.	18	Ascites and left pleural effusion	21 ,,	8 ,,	6 mm.	
h.	18	Left pleural effusion	8 ,,	8 ,,	5 mm.	
i.	24	Right ,,	6 ,,	8 ,,	7 mm.	

The serum sodium and potassium and fasting blood-sugar levels showed no significant differences between the two groups ; although some rather high sodium values and low potassium values were obtained they were divided between the two groups.

TABLE III.—*Serum Sodium, Potassium and Fasting Blood-sugar.*

Cases.	Serum sodium. (mg. %).	Serum potassium. (mg. %).	Fasting blood-sugar. (mg. %).
1	380	16	58
2	355	14·6	67·5
3	360	17·3	52
4	365	13·3	71·5
5	355	13·3	63
6	350	20	56
7	332	15	60
8	330	16	61
9	325	19·3	64
Controls.			
a	320	16	60
b	320	14·6	61
c	380	14·6	65
d	360	14	60
e	298 (haemolysed)	14·6	76
f	325	16	65
g	320	14·6	72
h	380	16·6	56
i	315	14·6	90

The 17-ketosteroid excretion per 24 hours was measured by colorimetry ; neither the total sterone value nor the 17-ketosteroid fraction showed any significant difference between the two groups.

TABLE IV.—17-*Ketosteroid Excretion* (*in Male Patients*).

	Excretion per 24 hours.			Excretion per 24 hours.	
Cases.	Sterone. (mg.).	17-Ketosteroid. (mg.).	Controls.	Sterone. (mg.).	17-Ketosteroid. (mg.).
1	28·3	21·4	a	29·6	20·5
2	33	24	b	30·1	21·3
4	13·4	9·96	d	12·2	7·4
5	19·6	15·2	e	19·2	13·8
6	19·9	14·6	f	14·6	10·2
7	18·9	13·75	g	22·4	15·5
8	21·9	15·05	i	14·7	8·9
9	26·5	19·2			

The eosinophil counts were done as described by Thorn (1949), and as suggested by Kersley *et al.* (1950) a control was done one day and the test the next day. Counts were made at 10 a.m. and 2 p.m. ; 0·25 mg. of adrenalin was injected subcutaneously into the upper part of the arm after the first count on the second day. The results demonstrate the variability of the eosinophil count, although individuals show very similar morning counts on the two days, the fall from the morning level (except for two anomalous control cases—a and h) and the increased fall after adrenalin, which, however, was not sufficient to be significant except in two cases, one test and one control.

The two groups show no significant differences ; if anything the average morning eosinophil count is less in the control group than in the group with lineae.

TABLE V.—*Eosinophil Counts.*

Cases.	Control. a.m.	Control. p.m.	Control. % fall.	Test. a.m.	Test. p.m.	Test. % fall.	Difference produced by adrenalin.
1	360	240	33	340	100	70	37%
2	120	40	66	120	40	66	0%
4	340	220	35	320	100	68	33%
5	140	60	57	140	10	93	36%
5	140	60	57	140	10	93	36%
7	360	180	50	380	120	47	−3%
8	80	80	0	80	40	50	50%
9	320	160	50	280	80	72	22%
Controls.							
(a	120	240	−200	120	80	33	233%)
b	160	120	25	140	40	72	47%
d	100	40	60	160	40	75	15%
e	240	40	83	220	160	27	−56%
f	220	120	45	240	80	66	21%
g	80	80	0	160	40	75	75%
(h	160	280	−175	80	40	50	225%)
i	140	40	72	180	80	55	−17%

The fluid balances show no significant differences ; all these patients were gaining weight at approximately the same rate.

TABLE VI.—*Fluid balances.*

Cases.	3-days average. Intake.	Output.	Difference.	Controls.	3-days average. Intake.	Output.	Difference
1	81 oz.	65 oz.	+ 16 oz.	a	53 oz.	68 oz.	− 15 oz.
4	60 oz.	78 oz.	− 18 oz.	b	80 oz.	61 oz.	+ 19 oz.
5	62 oz.	58 oz.	+ 4 oz.				

A skin biopsy having been performed on one patient just before arrival, further biopsies were not done, but this report is quoted by kind permission of Prof. Cureton : " Section shows in the centre of the specimen, beneath a rather atrophic epithelium, evidence of destruction of elastic fibres with disappearance of these elements in places, and clumping and fragmentation of the elastic in other areas. There is no evident pigmentation and no obvious local change in the blood-vessels."

DISCUSSION.

Red lineae distensae, which have been reported as interesting findings in a few cases of many diseases, are therefore seen to be common in patients treated by bed rest for mild tuberculous infections, especially pleural effusions ; in fact, in adolescents and young adults of either sex they are the rule rather than the exception. The incidence reported here agrees closely with the findings of Hurford and Snell (1943), who noted lineae in 45% of male patients between 16 and 26 years suffering from pulmonary tuberculosis.

The equal sex incidence does not appear to have been demonstrated before.

The age incidence in the present series bears out the statement repeatedly made that these lineae are commonest in young adults (Alessandri, 1931 ; Ebert, 1933 ; Parkes Weber, 1917, 1928 ; Rolleston, 1931 ; Hurford and Snell, 1943 ; Sprague *et al.*, 1950). Parkes Weber suggests that this is due to disproportionate growth between the skeleton and skin ; this appears an unlikely cause in the situations and age groups described here. Alessandri suggests that the age incidence is due to the more active endocrine glands in youth.

The relationship to weight gain in the present series is striking ; clinically, the weight gain appeared to be due largely to increased deposition of subcutaneous fat. Other reports note the association of gain in weight with the development of lineae (Ebert, 1933 ; Rosenthal, 1947 ; Sprague *et al.*, 1950), and in some cases when not specifically mentioned it seems likely that increase in weight had in fact begun when lineae appeared (Rolleston and Goodall, 1931 ; Leys, personal communication). However, Hurford and Snell (1943) state that only 50% of their cases showed any gain in weight.

The actual description of the lineae is similar in nearly all reports, although Ebert (1933) and Ormsby and Montgomery (1948) describe an early raised stage and the latter describe also a macular atrophy which may follow this.

The histology quoted agrees with those of Ebert (1933) and Ormsby and Montgomery (1948) in demonstrating weakness of the elastic tissue of the skin as well as pure mechanical stretching as the cause of rupture of these fibres, thus enabling lineae to form. Hurford and Snell (1943) found a suggestion of a definite delicate skin type in patients with lineae ; this has not been confirmed here, and none of the patients showed any other significant skin lesions such as the ecchymoses seen in Cushing's syndrome.

Lack of care of the skin leading to malnutrition, especially of the areas affected by lineae, is liable to occur in patients confined to bed. Possibly greater attention might assist in preventing them, in the same way that many women claim that they can avoid them in pregnancy by care of the skin. Parkes Weber (1928) describes very clearly the way the skin of a patient's back is subjected to stretching between the pillows and the bed when recumbent ; to this can be added the recurrent minor trauma produced in these regions by bending and stretching in bed. The absence of any lineae around the knees in the present series is striking and is possibly due to their treatment in bed, whereas in Cushing's syndrome, in adolescents and in adipose gynism and gynandrism the patient is ambulatory. It is in this site also that disproportionate growth between skeleton and skin would be expected to have the greatest effect, especially in younger patients.

The differences in the main sites of lineae in men and in women shown in this series is probably due to the greater deposition of subcutaneous fat around the hips and breasts in women.

Adrenal cortical activity has been shown to be closely related to the defence mechanism of the body (Selye, 1950). On the other hand, administration of cortisone has experimentally been shown to be deleterious to mice infected with tuberculosis (D'Arcy Hart and Rees, 1950). In the present series no relationship either way could be shown between the presence of lineae, suggested as evidence of cortical hyperactivity by Simpson (1950), and the course of the disease.

Biochemical investigations showed no differences between the two groups either, thus agreeing with the findings of Hurford and Snell (1943), who investigated pituitary fossa size, basal metabolic rate and sugar tolerance with negative results.

All measurements of cortical activity are, however, inaccurate ; when an accurate chemical method of estimating the total cortical reducing substances becomes available, this may possibly demonstrate a difference between patients with lineae and those without.

Conclusions.

Red lineae distensae are the rule rather than the exception in young adults of either sex treated with bed rest for tuberculous pleural effusions.

The causes appear to be : increase in weight due to subcutaneous deposition of fat in the sites where the lineae develop, stretching and recurrent minor trauma from movement in bed and weakening of the elastic fibres of the skin, probably from local malnutrition. However, the possibility of an endocrine factor, probably adrenal cortical overactivity, though unproven, cannot be excluded.

Summary.

The incidence of red lineae distensae in 92 patients of a pleural effusion unit was 41·8%.

Lineae were more frequent in the younger patients and in those gaining most weight.

The distribution was equal in men and women.

No differences of significance were found as between patients with lineae and those without in blood-sugar, sodium and potassium ; eosinophil count ; fluid balances, or in 17-ketosteroid excretion.

The causation of the lineae is discussed.

I should like to thank Dr. E. R. Jones of the Kent County Pathological Laboratory for the ketosteroid estimations ; Prof. R. J. R. Cureton of St. Bartholomew's Hospital for the biopsy report ; Mr. D. W. Plampion of Queen Mary's Hospital for the biochemical investigations ; the Department of Medical Illustration, Guy's Hospital, for the graphs ; and Dr. Duncan Leys for his advice and encouragement.

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HERPES ZOSTER FOLLOWING TRIVIAL INJURY: WITH NOTES OF A CASE.

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In former days herpes zoster was divided into two types: the idiopathic, and the secondary which followed a variety of stimuli—disease, such as pulmonary tuberculosis, pneumonia, malaria, leukaemia, and affections of the spinal cord and column; heavy metal intoxication, especially by arsenic; and injury. According to Chalier and Etienne-Martin (1932) zoster following injury was first noted by Charcot in 1859. Our earlier text-books mention it; Erasmus Wilson (1864) said "we lately saw a case which has arisen from a chill in bathing, and an inordinately long walk which strained the muscles of the hip; the eruption broke out on the weakened part". According to Allan Jamieson (1889) "blows have been known to cause zoster and so with other injuries," and Malcolm Morris (1917) mentions that a case in which herpes zoster limited to the foot followed a twist of the ankle has been recorded.

Herpes zoster is now generally recognized to be a virus disease and less attention seems to have been paid to such cases, especially in this country; in fact I have been unable to find any record of zoster following injury in British periodical literature of this century and our modern text-books contain little or no mention of it. Within recent years, however, continental and American literature has contained references to such an occurrence and I was therefore interested to see the following case:

J. C—, aged 66, a miner, was hit on the right orbital region at 11 a.m. on 5 May 1950 by a 4-ft. steel pit prop. He was dazed but carried on his work. It is not known if the skin was broken, but if so it was to a trivial extent. Next morning, as he still had severe pain in his head he reported to the casualty room at his work, and that evening, i.e., about 30 hours after the injury, a rash appeared at the site of the injury spreading to the right side of the head. He was admitted to hospital under the care of Dr. G. D. Malcolm on 11 May 1950 and a diagnosis of herpes zoster of the ophthalmic division of the right fifth cranial nerve with generalized zoster was made. I was asked to see the patient on 15 May and confirmed the diagnosis. The herpes zoster was typical of that usually seen in this area, tending to become gangrenous, with swelling of both right eyelids and conjunctival injection but no corneal involvement. The body was dotted with a sparse varicelliform eruption which had been present on admission. Skiagram of the skull revealed no fracture.

The disease followed a normal course, the lesions healing satisfactorily, but post-herpetic neuralgia was severe and was still troublesome when the patient was last heard of some months later.

The obvious question which arises from such cases is, to what extent is the injury responsible for the subsequent eruption ? It must be an exceedingly small proportion of cases of injury that are followed by zoster, and few cases of zoster that are preceded by injury so that when the sequence occurs accidental coincidence cannot be ignored. Yet, especially in cases such as that reported above where the interval between injury and eruption is short and symptoms, such as pain, are continuous, and particularly to the lay mind there is at least a *prima facie* case that the eruption resulted from the injury. Direct proof is not possible and one must base one's judgment on indirect evidence, such as consideration of published records, and on analogy with other virus infections.

Of published reports two papers are of special importance and interest, one from France and one from America. Chalier and Etienne-Martin (1932) recorded a case of ophthalmic zoster occurring 23 days after a fall with bruising of the same region, and quoted 25 cases from the literature. Bruising with or without fracture was the injury in 10 cases, sprain or strain in 3, unspecified trauma in one, lumbar puncture in syphilitics in 3, cases with lesion of the cervical ganglion in 7, and one case in an old amputation scar. In all cases save one the zoster occurred at the site of the injury ; in the remaining case it was on the opposite side of the body. The zoster appeared 1 to 34 days after the injury, the average being 4 days. These observers came to the conclusion that injury could be accepted as a causal factor in the production of certain cases of zoster and laid down the following criteria for such acceptance :

1. The zoster must supervene in the injured area.
2. The zoster must appear after an interval of from 1 day to 1 month.

The severity of the trauma is not a factor, nor is the presence of an open wound. It will be noted that these criteria exclude the case in which the eruption appeared on the side opposite to the injury.

Secondly, Klauder (1947) reported 8 personal cases and again reviewed the literature. The trauma was bruising in 4 of his cases, a horse-bite, removal of a foreign body from the eye, removal of a wart by electro-desiccation and injury by a jet of sulphur dioxide in one case each. He quoted over 21 cases from the literature, some of them already referred to, which included as causal factors a whip-stroke, a minor burn, osteopathic manipulation of the spine, and one case in which a physician (*sic*) enucleating an eye damaged by zoster pricked his finger and developed zoster 28 days later. In two of the cases a generalized varicelliform eruption was present. Klauder accepted Chalier and Etienne-Martin's conclusions and criteria, which all these cases fulfilled, and in a recent report (Klauder, 1951) recorded a further 11 cases besides quoting others. He confirmed his former views.

Traub and Spoor (1951) reported a case of a mechanic who slipped and

forcibly abducted his right thigh. He felt pain in the region of Poupart's ligament which persisted, and in 30 hours herpes zoster appeared in the same region. Tottie (1951) reported 3 cases of zoster following injury. He supported Klauder's views and considered that insurance companies should recognize this possibility.

Thus all these authors accept trauma as a causal factor in producing zoster in certain cases. On the other hand, Head, in Clifford Allbutt's *System of Medicine* (1903), doubted if such eruptions should be classed with true zoster. Thibierge in 1923 (quoted by Chalier and Etienne-Martin) accepted only cases in which the trauma provoked a lesion of the appropriate ganglia; the others, he considered, showed a zosteriform eruption but not true zoster. There appears, however, to be no difference in signs or symptoms between these and other cases of zoster. Alcorta (1946) reported a case in which a small wound of the forehead with injury to the eye with lime was followed by ophthalmic zoster. After a long argument to show that the subsequent disability to the eye was the result of zoster and not of a lime burn he concluded that because zoster is a virus infection the disability was not caused by the injury. The patient on this evidence was refused compensation. Alcorta was apparently unaware of the views of Chalier and Eteinne-Martin, to which he does not refer.

Accepting that the eruption is true herpes zoster and that herpes zoster is a virus disease, any connection between injury and zoster in these cases may, I believe, be explained in three ways. The first is easily understandable: the virus may be introduced at the time of injury, as in the case of the doctor who pricked his finger while operating on a zoster patient. According to van Rooyen and Rhodes (1948) a zosteriform eruption has been produced experimentally 9–21 days after injection of fluid from zoster vesicles. In the case quoted the eruption appeared 28 days after probable infection.

Cases may possibly occur through activation of a dormant virus already present in the host. In some, those with a long latent period, the virus may have to find its way to a ganglion put in a receptive state by the stimulation of the injury before producing its effect: in others, those with a latent period of a day or so, the virus is probably immediately available in the appropriate ganglia or elsewhere in the nerve tract to produce lesions in such a short time. This coincidence may appear unlikely, and indeed it must be rarely that such a combination of circumstances occurs when we consider the infinitesimal number of such cases compared with the enormous number of trivial injuries which occur daily.

Comparison of herpes zoster with other virus diseases shows an interesting similarity of habit. According to van Rooyen and Rhodes (1948) there is a fairly general impression that in acute anterior poliomyelitis over-exertion or other more specific injury predisposes to infection; such injuries are a fall or

a blow to a limb and, of course, tonsillectomy. They quote the view that it is possible that peripheral trauma may cause changes in the brain or cord around the central connections of the nerves supplying the affected area, and if the virus is already present in the C.N.S. it may be activated by such changes. In a leading article on predisposition to poliomyelitis *The Lancet* (1951) quotes reports of bulbar poliomyelitis occurring, nearly always, 6-24 days after tonsillectomy, but in rare cases of bulbar or bulbo-spinal paralysis appearing within a day or two. The same writer also quotes observations showing that when an attack of paralytic poliomyelitis begins within a month of inoculation procedure there is a greater than average risk that the inoculated arm will be paralysed. This, he admits, may mean only that inoculations can determine the site of paralysis, and not necessarily that the virus-host relationship is disturbed sufficiently to provoke the onset of an overt poliomyelitic illness.

In varicella the rash may be most profuse in areas of skin irritation, and van Rooyen and Rhodes quote a case of this occurring in the area of intradermal injection of streptococcal toxin. Edwards (1951) reported a case of a boy in whom a profuse localized eruption of varicella vesicles appeared on the site of a diphtheria immunization injection given 7 days previously. The eruption spread to the rest of the body 24 hours later. I was asked recently by Dr. W. H. Gossip to see an exactly similar case which had resulted in two other members of the family developing varicella.

Findlay and MacCallum (1940) recorded a case of recurrent herpes simplex in which the first eruption followed a trivial injury with a break in the skin, and they quote four similar cases from the literature. At the time of the early reports on herpes following injury a clear distinction was not always made between herpes simplex and zoster.

It will thus be seen that similar problems arise with other viruses, and it seems possible that all those mentioned can react in a similar way to injury.

I believe that there is sufficient evidence to conclude that in rare cases injury can take a part in the production of herpes zoster, either by allowing entry of the virus at the time of injury or by activating a latent infection already present. Whether or not such latent infection would in time have been overcome by the host had not the injury occurred it is not possible to say. In the present state of our knowledge the criteria of Chalier and Etienne-Martin for the recognition of such cases appear reasonable.

Summary.

A case of herpes zoster occurring 30 hours after minor injury of the same region is reported. A review of the literature shows that other observers have noted similar cases, and concluded that in rare cases injury, even trivial, may be a causal factor in the production of herpes zoster. In recent literature

only one writer, apparently unaware of the work of these observers, reported such a case and considered there was no connection between the injury and the subsequent eruption.

Such an occurrence, it is considered, could be due to the introduction of the virus at the time of injury or to the activation of a latent infection.

Similar behaviour by other viruses is noted.

No positive proof can be adduced, but there appears to be strong presumptive evidence that there is a connection between injury and the subsequent appearance of herpes zoster at the site of injury within a period of from one day to one month.

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THE PERIODIC ACID-SCHIFF STAIN IN THE DIAGNOSIS OF DERMATOMYCOSES.

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The diagnosis of many forms of ringworm, such as classical tinea circinata of the glabrous skin, is so obvious clinically that some deny the necessity for confirmation by special methods. In certain cases, however, it may be difficult or even impossible, and this often applies to interdigital and plantar eruptions. Since many of these conditions may be so rapidly aggravated by fungicides if they are not mycotic, or altered in appearance if they are, it seems desirable wherever possible to confirm the diagnosis before starting treatment. All the superficial mycoses may be diagnosed by examining skin, nail or hair in potash; this is cheap, readily available, and usually gives a rapid answer. On the other hand it is a messy procedure requiring practice to give results of value. Further, certain difficulties arise even for the experienced, including the appearance of large amounts of "mosaic fungus" identical with the "ghosts" of Whitfield and caused by the solution of intercellular cement substance. Difficulty may also be caused by the presence of excessive oil or grease on the skin or by the scantiness of fungus in certain specimens, especially of nail. An apparently obvious alternative is to stain the fungus. Unfortunately, although it is simple to stain fungus in specially prepared material, most of the stains available are non-selective, staining the keratin background as readily as the mycelium, so that they have never found favour for diagnostic purposes.

The periodic acid-Schiff (P.A.S.) stain depends for its action on chemical changes induced in polysaccharides by periodic acid, enabling a colour reaction to develop in the colourless Schiff's reagent. It is for this reason that it is widely used in histology for demonstrating, for example, mucin and glycogen (McManus, 1946, 1947). Since fungi contain substantial amounts of polysaccharides it is logical to use the P.A.S. stain for their demonstration, and its use for this purpose in thin sections is well established. It is, in fact, the method of choice (Kligman and Mescon, 1950). In a recent article Kligman *et al.* (1951) described a modified stain said to be suitable for use in routine diagnosis. It is doubtful whether clinicians in this country would consider any relatively complex staining method suitable for use in consulting room or clinic, and in any case one of the ingredients (zinc hydrosulphite) appears to be unobtainable in the United Kingdom. For laboratory use the modification seems to offer little advantage over the usual McManus P.A.S. which is available

in many pathology departments. Certainly it is a little quicker, but not sufficiently so to be a very great advantage. The claim that Schiff's reagent is difficult to prepare and very unstable is not borne out by our experience, which has shown it to be perfectly effective after six months as long as a stock solution is prepared and a little fresh stain used as required.

I therefore tried to find a method of employing the stain for the practical diagnosis of dermatomycoses.

Technique.

As emphazied by Kligman *et al.*, the secret of success lies in the collection of satisfactory material. The method they suggested of taking scrapings and attaching them to slides with albumen was abandoned for the following reasons : In many cases the fungus is situated quite deeply, and by scraping one collects only the most superficial horny layer ; many scrapings are too thick to stain evenly and too small to show a reasonable length of mycelium ; finally the albumen makes a messy background and often itself takes up the stain. The following method was evolved after various experiments :—

Skin : Roofs of vesicles, scales, or scrapings in the superficial mycoses such as tinea versicolor or erythrasma are collected and cut into very small pieces ; the entire roof of a tense vesicle of the sole, for example, is much too thick.

Nail : Very fine shavings of nail-plate are taken with a sharp scalpel, or, better, the friable material beneath the free edge is filed or picked off and cut into pieces as small as possible.

Hair : Hairs or stumps may be stained, but here the fungus so rapidly becomes obvious when examined in a drop of potash or polyvinyl lactophenol (Downs, 1943 ; Huber and Caplin, 1947) that staining is unnecessary except for demonstration purposes.

Specimens obtained as above are placed on a slide in 10% potash and a coverglass applied ; for nail gentle heat may be necessary. The coverglass is gently pressed at intervals until the fragments flatten without actually disintegrating. The purpose of this is to reduce the material to a thinness suitable for staining ; this should be such that the coverglass will lie quite flat without its edges being noticeably raised from the slide. This may be controlled under the microscope, when the diagnosis may be made in most cases without more ado, or when suitable pieces may be selected for demonstration if this be one's purpose.

At this stage the coverglass is removed and adherent material returned to the slide ; any pieces which still seem too thick may be gently teased with needles. Excess potash is drained off, and the slide washed with tap-water three times, being carefully drained between each change. After this three similar washes are given with alcohol and the slide left to dry, when the material will be firmly attached. These steps are described in detail because they are essential to success. In fact they are simple, taking only two or three minutes, and it is remarkable how readily the small fragments remain in place when the water is removed.

The slides may now be set aside and stained at leisure. Details of the preparation and use of the reagents may be found in the original article, but the steps and times are here summarized for convenience :

*Periodic acid—5 minutes.
Rinse in water.
* Schiff's reagent—10–15 minutes.
**Without washing* Sulphurous Acid : 2 minutes in each of three changes.
Wash in running water 10–15 minutes.

* The above must be carried out in closed vessels, not on the slides.

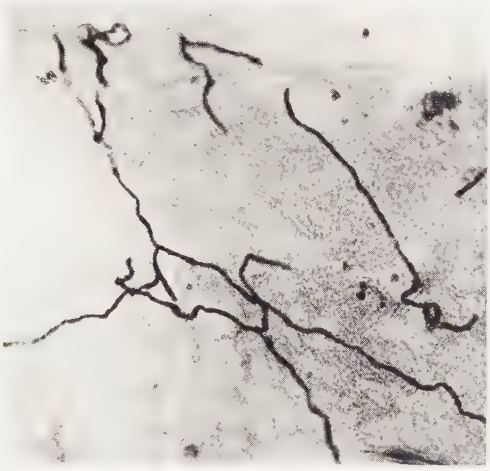

FIG. 1.—Skin from tinea corporis. × 320.

FIG. 2.—Mycotic infection of nail. × 200.

FIG. 3.—Monilia in skin. × 320.

If there is any fear that the material will be lost during the wash in running water the slides may first be celloidinized ; this is a simple procedure, but is not essential, especially with small fragments. The staining reaction is an " all or none " process, and any attempt to reduce the staining or washing times leads to degraded results. After the final wash the slides may be dehydrated and mounted in balsam or examined at once in glycerin or in polyvinyl lactophenol, which will harden to give a permanent mount in a day or two.

Counterstaining is unnecessary, as the contrast between brilliant red mycelium and pale pink background is so striking. Light green as recommended for sections causes trouble after potash ; 0·5% malachite green may be used, but tends to come out during dehydration and does little to improve the results.

Fig. 4.—Skin in tinea imbricata. × 140.

Conclusions.

By this method striking results may be obtained (Fig. 1), and even when the diagnosis is evident in the unstained preparation it is infinitely more obvious after staining. It is thus a simple matter to examine a very large amount of material in which fungus is difficult to find with potash for one or other of the reasons mentioned above (Fig. 2). Monilia, which may be difficult to find with potash, is readily demonstrated (Fig. 3).

In no case where I have found fungus with potash have I failed to find it on staining. In several cases, on the contrary, where fungus has appeared to be absent, or has been found only in small quantity or of dubious appearance after prolonged search in potash, I have readily found large amounts of obvious material on staining. These are personal findings which have not been checked by others ; it is probably true that staining would disclose few positives not

found by a skilled worker taking his time with potash, but the diagnosis in the stained preparation is so obvious that it can be made with ease even by the inexperienced. A negative report can be given with some confidence if sufficient material has been properly stained. The method would appear to be of real value to the pathologist called upon to do occasional mycological work, and where the clinician lacks the time or the facilities to make his own potash examination. One can, of course, readily stain a dozen or more slides at once, whereas the simultaneous examination of several potash slides is a tedious operation. For preparing permanent specimens for teaching or record purposes it is unsurpassed.

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A LIQUID SYNTHETIC MEDIUM SUITABLE FOR THE DIFFERENTIATION OF *MICROSPORUM AUDOUINI* GRUBY 1843, AND OF *MICROSPORUM CANIS* BODIN 1902.

J. W. HUGHES.

Introduction.

Ever since Sabouraud published the first descriptions of *M. audouini* and *M. canis* on an agar medium in 1892 attempts have been made to find a simple, easily reproduced medium which will permit the quick separation of these two species. Experience has shown that even slight variations in the source of the peptone, a constituent common to all of the earlier techniques, could produce gross cultural variations.

More recently attempts have been made by Langeron and Milochevitch (1930) to cultivate the microspora on such media as barley, wheat and rye. While these attempts have met with a certain degree of success it has not always been found possible to duplicate the results, a difficulty which will exist as long as complex biological substances of unknown and variable composition are used in the culture medium.

Conant (1936) endeavoured to differentiate the various microspora by means of gross cultural characteristics. He used both peptone and cereal media, concluding after many experiments that "the strains studied showed a great diversity of reaction to various agar mediums and to any one medium, which invalidates the use of gross cultural appearances for diagnostic purposes."

More recently still several workers, notably Davidson and Gregory (1933), Zimmerinov and Rafalovich (1948), Kligman and Rebell (1950), and La Touche (1951), have identified these fungi from hanging-drop cultures. The last mentioned of these methods is perhaps the most successful to date; even so, in a minority of cases very careful search for macroconidia may have to be made, for sometimes when present they are not visible until the mycelium has been teased out with a fine needle. Occasionally a culture of *M. audouini* will produce some macroconidia, and unless these are carefully examined a wrong identification may result. The methods of Kligman and Rebell and of La Touche both employ a honey-peptone-agar medium.

In the opinion of the author perhaps the most successful method for the identification of these two fungi is that used by Walker (1950). She developed a technique based upon the fact that amongst the dermatophytes hyphal fusions or anastomoses occur when mycelia of two different colonies of the same species come into contact in a slide culture. Hybridization is probably so rare that the formation of hyphal fusions may be regarded as diagnostic at any rate for *M. audouini* and *M. canis*.

Unfortunately the weak point of these techniques, though to a less extent of the last mentioned, is the utilization of constituents of the culture media which are not of definitely known and constant composition. As even a slight variation in one of the ingredients will produce an almost unrecognizable culture, this point is of vital importance to the quick and accurate identification of the fungus involved in a case of tinea capitis.

The most satisfactory culture medium would appear to be a liquid synthetic one which could be duplicated at any future date from readily obtainable constituents.

Experimental Work.

In the course of some experiments with *M. audouini* and *M. canis* it became necessary to obtain growth of these organisms using a liquid synthetic medium, and so far as the writer is able to ascertain, none have been reported previously. Up to the present time only just over one hundred cultures have been grown in this liquid synthetic medium, nevertheless the difference in the growths of these two fungi is very striking. After 14 days' incubation at 26° C. the two species can be differentiated by the merest glance at the cultures. The details of the medium are offered here in the hope that it may be of interest to other workers, some of whom may care to develop the technique further :

Composition of medium :—

Acid hydrolysed casein	2·0 g.	*i*-Inositol	500·0 µg.
Glucose (Kerfoot)	25·0 g.	Biotin	100·0 µg.
Potassium dihydrogen phosphate (B.D.H.)	2·5 g.	Folic acid	100·0 µg.
Magnesium sulphate (B.D.H.)	0·5 g.	Iron	200·0 µg.
Sodium chloride (B.D.H.)	0·1 g.	Copper	100·0 µg.
Calcium chloride (B.D.H.)	0·1 g.	Manganese	20·0 µg.
Aneurin	1000·0 µg.	Zinc	2000·0 µg.
Riboflavin	200·0 µg.	Molybdenum	20·0 µg.
Nicotinic acid	500·0 µg.	Boron	20·0 µg.
Calcium *d*-pantothenate	500·0 µg.	Adenine	10·0 mg.
Pyridoxine (free base)	500·0 µg.	Guanine	10·0 mg.
Choline chloride	500·0 µg.	Uracil	10·0 mg.
p-Aminobenzoic acid	500·0 µg.	Xanthene	10·0 mg.
		Aqua dest. (glass still) to pH adjusted to 5·6	1000·0 ml.

Trace elements are normally kept in concentrated stock solution similar to that in common usage in most bacteriological and mycological laboratories. These solutions were made in the present work so that 2 millilitres of each solution were required to each litre of medium.

Solution A.

Ferric chloride	100·0 µg. of iron per ml.
Cuprous chloride	50·0 µg. of copper per ml.
Manganous chloride	10·0 µg. of manganese per ml.
Zinc chloride	1000·0 µg. of zinc per ml.

Solution B.

Ammonium molybdate .	10·0 μg. of molybdenum per ml.
Sodium pyroborate .	10·0 μg. of boron per ml.

The chemicals in these two trace element solutions, with the exception of the zinc chloride, were B.D.H. Analar standard, as were the other chemicals supplied by this firm. In the main the vitamins and the adenine, guanine, uracil and xanthene were supplied by Messrs. Roche Products, Ltd.

The acid hydrolysed casein was prepared by the second method recommended by Barton-Wright (1946) with a few slight modifications. Instead of using vitamin-free casein, casein supplied by the British Drug Houses under the title "Light White Soluble" was used. The preliminary ethanol extraction was found to be unnecessary. Instead of shaking the 100 g. of casein at pH 3·0 with 20 g. of activated charcoal for 20 minutes, 60 g. of charcoal were used and the shaking continued for one hour. The adsorption process was repeated after the pH of the casein solution had been adjusted to 7·0. This modified treatment, which has now been in use for more than four years, is found to remove more vitamin than the original method.

Sterilization may be effected by autoclaving the medium in the flasks in which the cultures are to be grown at 5 or 6 pounds pressure for 30 to 20 minutes. 150 ml. Erlenmeyer flasks each containing 30 ml. of medium are very suitable for this purpose, although 50 or 100 ml. flasks are equally satisfactory. The flasks should be incubated, after inoculation with one or two infected hairs or scales, for from 10 to 14 days at 26° C. At 20° C. growth is definitely slower, and a temperature much in excess of 30° C. is not to be recommended.

After 14 days the mycelium of *M. audouini* consists of a raised white centre, the diameter of which varies from the size of a pin-head to 3–4 mm. The colony is in all not over a centimetre in diameter, the periphery being only just on the surface with the majority of the hyphae below the surface (Fig. 1). If two infected hairs or scales are sown too close together the resultant growths may coalesce to give a colony which may be of slightly greater diameter than the combined diameter of two separate colonies. Even so, the colony is small compared with that of *M. canis*. A single colony of *M. canis* has been observed to occupy the entire surface area of a 150 ml. Erlenmeyer flask containing 30 ml. of medium, i.e., approximately 6 cm. (Fig. 2). There is a definite mycelium above the gaseous-liquid interface of approximately 1 mm. thickness. Sometimes with this species there is a raised centre the size of a pinhead, surrounded by a band 1–2 mm. wide of depressed mycelium, which is only just above the surface of the medium, this band being in turn surrounded by the wide raised periphery of the colony. The mycelium is a creamy white, whereas that of *M. audouini* appears to be a light brownish straw colour, because so much of it is below the gaseous-liquid interface.

Summary.

A method utilizing a simple and easily reproducible liquid synthetic culture medium for the differentiation of *M. audouini* and *M. canis* is presented. Although the method has not as yet been subjected to exhaustive study (only

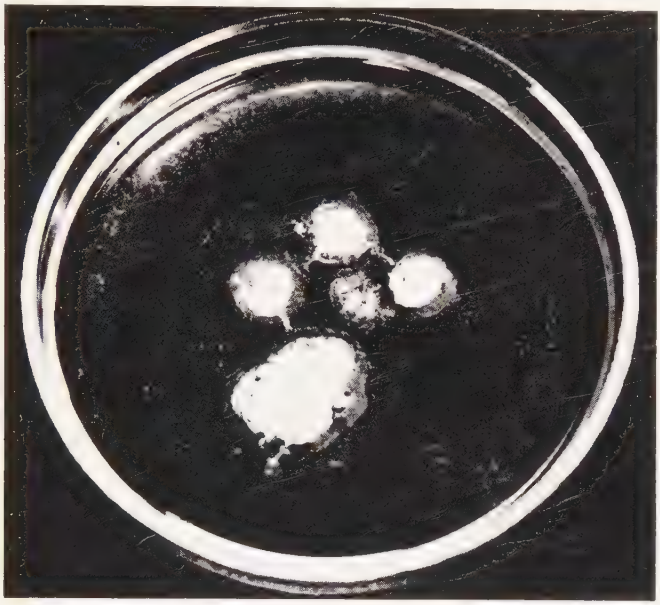

FIG. 1.—*M. audouini* culture of 10 days' growth. The diameter of the Petri dish is 3½ in. This culture was grown in a 150 ml. Erlenmeyer flask and decanted into a Petri dish of water for photographic purposes.

FIG. 2. A typical 10-day growth of *Microsporum canis*.

just over 100 cultures have been examined), it has so far given complete agreement with the clinical diagnosis, the La Touche hanging-drop method and in ten cases tested with the hyphal fusion technique of Walker.

Acknowledgments.

The author wishes to express his grateful thanks to Professor Sir James Spence for his assistance and encouragement; to Professor Meirion Thomas, F.R.S., and Dr. Philip G. Fothergill for their generous provision of laboratory space and equipment; and to Dr. R. F. Lunn and Dr. H. M. Dixon of the Newcastle upon Tyne School Medical Service, who very kindly placed all the facilities of their ringworm clinic at the author's disposal.

This work was made possible by personal and equipment grants from the Medical Research Council.

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ROYAL SOCIETY OF MEDICINE.

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17 January 1952.

Poikiloderma Vasculare Atrophicans with Reticulosis.—Dr. Stephen Gold.

J. B—, aged 30, was first seen in November 1950. Eleven years ago when serving in the Army he noted on his left upper arm a scaly pink patch, which was sore but never irritated; later, other patches developed on the lower abdomen, right upper arm, outer side of right thigh and, more recently, under his right axilla, on the left buttock and smaller ones scattered on the trunk (Fig. 1). A biopsy was done while

Fig. 1. Atrophic pigmented areas scattered over body.

he was in the Army and the report apparently was that a of tuberculide. Later he was seen at Cardiff, where a diagnosis of parakeratosis variegata was made. He was subsequently invalided from the Army and was referred to West London Hospital, where parapsoriasis was diagnosed.

On examination in 1950 he had multiple areas resembling chronic radio-dermatitis: these were pigmented and atrophic, the skin resembling tissue paper. Some showed moderate scaling and felt slightly infiltrated, while haemorrhagic puncta and dilated vessels were visible but true lichenoid papules were absent.

There was no enlargement of spleen, liver or lymph glands.

White blood count total 4700 cells per c.mm. Differential count normal. No eosinophilia.

The diagnosis of poikiloderma of the Lane type was made and a biopsy done.

Histological report (November 1950). Epidermis is atrophic but granular layer is intact. The basal layer shows hydropic changes and there is marked flattening of the dermo-epidermal junction. In the subpapillary region there is a dense infiltrate composed largely of lymphocytes and histiocytes; occasional plasma cells and polymorphs are present and numerous melanophages. This infiltrate encroaches on the epidermis in places to form so-called "Pautrier's abscesses." The infiltrate extends into the subcutaneous tissue but certainly at this depth it is less dense. Giant cells are not apparent.

The only symptom of which he complained was of dryness and soreness of the skin, which would readily crack during the cold weather, particularly under the right axilla, where a small fissure developed into a chronic ulcer; this would heal and break down again. The local application of thorium X did not produce any marked change, neither did a course of systemic penicillin (9,000,000 units over fourteen days).

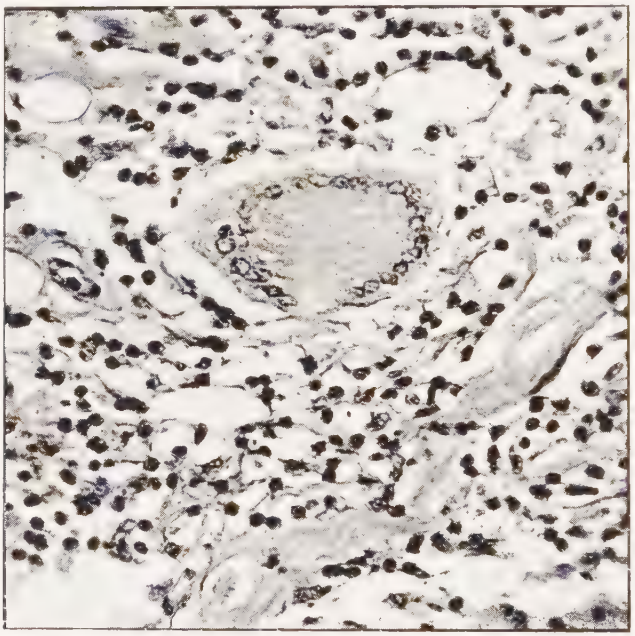

FIG. 2.—Histological section from axillary tumour, × 335, showing presence of typical Langhans' giant cells amidst pleomorphic infiltrate.

He has been seen regularly as an out-patient and his general health is unimpaired. He complains of no symptoms apart from the dryness and soreness and is working as a street trader. He has gained weight recently (1 stone (6·4 kg.) in six months).

In November 1951 a mass was detected in the right axilla lying underneath an area of poikilodermatous skin and apparently in the substance of the latissimus dorsi muscle, but a biopsy showed the subcutaneous tissue to be oedematous and the mass to be lying on the surface rather than in the muscle.

Histological report (January 1952).—The tissue is composed of a dense cellular infiltrate, the majority of cells being lymphocytes and histiocytes with occasional polymorphs and plasma cells. Necrosis is absent and there is no apparent follicular arrangement, although this is revealed with reticulin stains. There are no giant cells typical of mycosis fungoides or of Reed-Sternberg cells. There are, however, fairly numerous and perfect examples of Langhans' giant cells (Fig. 2).

Comment.—This case resembles identically the one reported by Oliver (1936), in which similar cutaneous changes were present in a patient suffering from mycosis fungoides. Ulceration is an unusual feature and occurred in Lane's original case (1921), who eventually died of Hodgkin's disease. It is also interesting that the patient reported by Ormsby (1917), who died of lymphosarcoma, was an obese young man like my patient. I hesitated to make a diagnosis of mycosis fungoides because of the presence of typical Langhans' giant cells in the tissue removed from the axillary tumour, though in other features the cellular infiltrate is quite typical.

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Poikiloderma Vasculare Atrophicans with Early Mycosis Fungoides. Dr. R. G. Howell (introduced by Dr. G. B. Dowling).

Mrs. R. R—, a widow, aged 65.

History.—Five years ago she developed a non-irritant rash on the arms and legs, which remained unchanged until eight months ago, when it spread to the trunk and slightly to the face. At that time scattered plaques and papules, which irritated, appeared on the trunk and limbs.

Previous history.—Nothing relevant to the present complaint.

On examination.—There are diffuse areas of poikiloderma on the limbs and trunk, with slight scaling of the palms and soles and on the face. Scattered in the areas of poikiloderma on the trunk and limbs are numerous red infiltrated plaques and papules. The mucosae are normal except for two small erythematous patches on the palate. The appearance of the lesions on the trunk has been altered by recent treatment with Grenz rays (3 applications of 1000 r at weekly intervals). There is no lymphadenopathy and the spleen is not palpable. There is no muscle weakness. General examination shows no other abnormality.

Histology of a papule from the chest (Dr. I. W. Whimster).—There is moderately severe epidermal atrophy, with diffuse infiltration of the upper dermis by inflammatory cells of many types, including some atypical forms.

Comment.—This case is another example of mycosis fungoides supervening after a latent period on the poikiloderma of Jacobi and Lane.

Poikiloderma Vasculare Atrophicans of Jacobi-Lane. Dr. J. B. Lyon (for Dr. J. L. Franklin).

Male, aged 30, engineer.

He first noticed scaly red patches on the extensor aspect of the elbows about ten years ago; there has been a gradual progression over the years to involve most of the body, the trunk being relatively spared. During the past three years the ears and eyelids have become red and scaly but not swollen. His general health has otherwise been good, without any relevant family history.

There was extensive and widespread erythema with telangiectasia on both arms, buttocks and legs. Areas of pigmentation were present behind the knees, and on the right thigh there was a well-marked linear arrangement of the pigment with some reticulation. Pinkish lichenoid papules (as described by Gougerot and Eliascheff) could be seen in the more markedly erythematous areas.

An extensive area of erythema with a centre simulating x-ray dermatitis and early atrophy was present on the left buttock. On the whole there was not a great deal of atrophy so far. Both hands were dry and a dusky bluish-red colour. The trunk was relatively spared except for a fine generalized scaling; the ears and eyelids showed a scaling erythema without oedema, the skin over the former being rather

stretched out and tight. His general condition was good and all other systems were normal.

A biopsy was taken from the extensor surface of the arm and above the elbow; the sections showed epidermal atrophy which was discontinuous and loss of basal cells and rete pegs in the affected patches. The superficial layers of the corium showed areas of round-cell infiltration, and at this level there was some loss of elastic tissue.

Comment.—This case seemed to fit in with the more classical type of poikiloderma (Jacobi-Lane).

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Dr. H. Haber, referring to Dr. Gold's case: The presence of Langhans' cells does not militate against a diagnosis of reticulosis. I have seen a case of lymphocytic reticulosis exhibiting many Langhans' cells. Later on the case became clinically and histologically mycosis fungoides. I regard the Langhans' cells as reactive cells due to the metabolic products of the neoplasm and not as tumour cells.

Dr. D. I. Williams: One can divide these cases into two groups. The one which we have seen to-day with curiously defined and localized skin changes, the patient's skin otherwise seeming to be quite normal; this type seems to go on to one or other of the reticuloses. The other is found more often in patients who come from Central Europe, in which the eruption is usually universal and there seems to be much more pigmentation. I do not think this type ever goes on to a reticulosis, but perhaps I have not been able to follow such cases for a long enough time.

Dr. L. Forman: I agree that Dr. Lyon's case has better claim to the title of poikiloderma than the cases shown by Dr. Gold and Dr. Howell. I had a similar patient in whom the redness and atrophy involved a larger part of his body. I have had him under observation for twelve years and there has been no evidence of reticulosis. One does get the impression that this inflammatory reaction has completely died out and that it would be unlikely that a reticulosis would develop.

Dr. E. Waddington: A patient I showed here (*Proc. roy. Soc. Med.*, 1951, **44**, 673) had widespread lesions which had been present for twenty-five years before any infiltration occurred. Oliver (1936, *Arch. Derm. Syph., Chicago*, **33**, 267), reviewing the subject, described a number of cases in which mycosis fungoides appeared twenty years after the onset of poikiloderma. My case was originally presented to the Section by Dr. G. Mitchell-Heggs and Dr. F. W. Jacobsohn (*Proc. roy. Soc. Med.*, 1936, **29**, 717) as a case of poikilodermia, and the histological section showed the presence of the typical lichenoid papules seen in this condition.

Multiple and Naevoid Rodent Ulcers of Face (Paul). Dr. O. L. S. Scott.

This patient, a married woman, aged 60, has had a heavily freckled face all her life, and has been under treatment for the past 15 to 20 years. She has had a succession of crops of small nodules which appeared on her face and formed rodent ulcers. Sixteen of these have been treated with radiotherapy in the past 15 years. She now has several cystic basal-cell carcinomata on her face, numerous scars, pigmented naevi and telangiectasia. Sections of the ulcers have shown basal-cell carcinomata with much connective tissue between the groups of these cells. Her sister is at present being treated in another hospital for several rodent ulcers of the chin; her other sister is normal.

This condition, originally described by Paul (1933), has not been mentioned in any subsequent textbook or other literature. His criteria of diagnosis were (*a*) appearance in adult life of multiple discrete nodules which grew and formed rodent ulcers, (*b*) appearance from time to time of fresh crops of nodules, (*c*) no particular localization on the face, (*d*) occurrence without keratoses, or other results of sunlight, and (*e*) the presence of other naevoid structures such as milia and telangiectasia. This case, I believe, fulfils these criteria so far as the face is concerned, but she has a rather similar picture together with keratoses and atrophy on the exposed areas of both upper limbs.

It is most unlikely that this disorder and Brooke's epithelioma adenoides cysticum are variants of one another. A case like this was shown at the November meeting of the Section by Dr. Eric Waddington, and the matter was then discussed. A possibility which was not mentioned, and which is particularly applicable in this case, was that the disorder represents the heterozygous state for xeroderma pigmentosum. It is believed that the heavily freckled individuals in families with xeroderma pigmentosum are the heterozygotes for this recessive condition. Unfortunately no record exists of marriage between two patients with Paul's disease or their near relatives, but the possibility remains. Until then, and probably afterwards, we shall still be defining the unknown in terms of the unknown.

REFERENCE.

PAUL, N. (1933) *Cutaneous Neoplasms.* London : H. K. Lewis & Co. Ltd., p. 46.

Dr. L. FORMAN : I think this patient is unduly sensitive to light and should be looked upon as suffering from a degree of xeroderma pigmentosum. She shows irregularly pigmented and atrophied skin, particularly on the forearms, and two warty, ? pre-epitheliomatous lesions on the backs of the hands. She says that she sunburns very easily.

The PRESIDENT : Fully developed cases of this type must be very rare ; at the same time I believe that basal-cell epitheliomas occur in subjects with such common naevi as freckles, milium bodies and skin tags more often than in those without them ; especially after long sojourn in sunny climates.

Ringworm of the Scalp.—Dr. C. D. CALNAN.

J. H—, boy aged 3½.

History.—About five weeks ago a sore patch developed on the left side of his head and a tender lump behind his left ear. He lives in the country, and the garden of the house is adjacent to a farm where there are various animals with which he plays.

No other children and no animals are known to be affected.

Examination.—There is a typical kerion about 5 cm. in diameter on the left parietal area. The skin shows some loss of hair and is inflamed with a boggy swelling and follicular pustules. There is some post-cervical adenitis.

No fluorescence under Wood's light.

Microscopy shows profuse mycelia and spores.

Cultures have grown *Microsporum gypseum.*

Ringworm.—Dr. C. D. CALNAN.

H. H—, boy aged 5.

History.—He was first seen in September 1951, when referred with " a lesion on the left temple. It originated as a ' ring ' infection which almost cleared on treatment with iodine, but later recurred."

Examination. –In September I found a scaly patch on the left temple, 2·5 cm. in diameter, where there was some loss of hair. A few hairs were lustreless and covered with a dusty grey film. There was no evidence of any tissue reaction.

No fluorescence under Wood's light.

Mycology. –A hair examined in 10% KOH solution showed chains of large spores and mycelia in the hair. Endothrix Trichophyton infection was diagnosed. Mycelium was also present in scales.

Culture gave a very slow growth of fungus which was deep red in colour. Red pigment did not diffuse into the medium at first and *T. violaceum* was suspected. After a few weeks the surface of the colonies became white and fluffy and the red pigment diffused. It was shown to be a dysgonic variant of *T. rubrum.*

Progress.—No more infected hairs have been found, but the fungus remains in the scales and persists in spite of the application of various fungicides. Though treatment has been stopped for six weeks, the condition has not extended and no infected hairs have been found.

Comments.—The *M. gypseum* infection of the scalp is shown because of its rarity in Great Britain. Walker reported only 2 isolations amongst more than 2000 positive cultures from tinea capitis material in a survey of the dermatophytes of Great Britain. The absence of fluorescence has been noted by several authors in recent years.

The *T. rubrum* infection is unusual in that affection of the scalp hair with this fungus is almost unknown. The usual difficulty in treating infections by this organism has been encountered.

Dr. R. W. Riddell: These two cases of tinea capitis are interesting mycologically. The first, in spite of the profusion of broad hyphae and arthrospores of *Microsporum gypseum* in scrapings from the kerionic area, had no evidence of hair invasion either microscopically or by fluorescence. In text-book descriptions of scalp infections with this organism, it is usually considered to behave similarly to the other two *Microsporum* species. Dalton *et al.* (*J. invest. Derm.*, 1950, **15**, 421) and Wilson and Plunkett (*J. invest Derm.*, 1951, **16**, 119) have noted that this may not be so, as in fact the present case suggests. A similar profusion of the organism was seen in scrapings from a facial lesion in a young woman patient from Dr. Wigley. This erythematous lesion was covered with a yellow powdery layer which "looked like a fungus colony"; *Microsporum gypseum* was readily grown by culture.

The second case was important because without careful microscopy and cultures its nature would have remained in doubt. Examination of hairs extracted from the affected area showed occasional hyphae growing down into the follicles, but not actually attacking hair. Colonies grown from this material were very slow to develop, and were glabrous and deep crimson in colour; *T. violaceum* was first suspected. Later however deep red pigment developed in the medium, and the short white hyphae mat which covered the colony showed the microscopical features of *Trichophyton rubrum*. We have isolated this dysgonic strain of *T. rubrum* in only 3% of our *T. rubrum* isolations.

Dr. C. H. Whittle: I have been interested in an epidemic of *M. gypseum* infection in a rural area, occurring in adults on the open skin. There have been about five or six cases in a plant nursery. The lesions were quite typical inflammatory ones, with erythema and blisters on the exposed parts and all the cases examined gave pure cultures of *M. gypseum* (confirmed by Dr. Jacqueline Walker). This fungus is uncommon in the British Isles, and Dr. J. Walker's review (Walker, 1950) bears out what Dr. Riddell has said. I understand that *M. gypseum* infections are more common in Brazil. But the epidemic in Hertforshire is still under investigation, and I have not so far been able to trace the importation of any source of infection. The patients are all living in the country, but there has been no contact with farm animals, nor as far as I know with domestic animals.

With regard to the second case, I think we must be prepared to see curious atypical lesions in children's heads. We are ourselves seeing quite a number. We have a small epidemic—indeed, we have two epidemics running quite separately, one in Bedford and one in Peterborough. In the former all the cases are very mild and have arisen in one school. There is practically no falling hair; patches of scurf are present but we have to look with the utmost care to find any broken hairs. In Peterborough, on the other hand, we are dealing with more inflammatory lesions which would seem to be caused by a trichophyton. These cases, which may be very easily overlooked, are giving unusual mycological findings.

The *M. gypseum* cases are in Hertfordshire, and I believe Dr. Calnan's case was at Hoddesdon, which is in the same county, but 30 miles away. It is unlikely that there is any connection between the two.

Reference.

Walker, J. (1950) *Brit. J. Derm.*, **62**, 243.

The following cases also were shown:

Dermatofibrosarcoma.—Dr. F. Ray Bettley.

Tuberculide or Sarcoid.—Dr. D. L. Rees (for Dr. G. B. Dowling).

OBITUARY.

H. L. JACKSON.

We greatly regret to record the death of Mr. H. L. Jackson, for many years a director and later chairman of the firm of H. K. Lewis & Company Limited, our publishers. Mr. Jackson joined the firm in 1888, the year in which this journal was first published. The help which he gave to successive editors in innumerable ways is well known to all who saw behind the scenes, and his great interest in our publication continued for the rest of his life. Every reader of the *British Journal of Dermatology* has in some measure profited from his skill and wisdom.

CORRESPONDENCE.

To the Editor of 'The British Journal of Dermatology.'

Sir,—Drs. Witten and Lazar in their report of a case of "Multiple Benign Basal-cell Epithelioma with Zonal Arrangement" (p. 97) state that it is believed to be the first of the kind to be presented.

But, in the pages of this Journal for the year 1917 (**29**, 81), there lies buried the report which I then made of a similar case under the title of "Multiple Ulcerating Basal-cell Epithelioma with Zoniform Distribution and probably of Sweat-gland Origin," with drawings of the eruption and of microscopical sections.

The sole difference between my case and that of Witten and Lazar (if indeed there be any difference) is that mine had a suggestion of malignancy; but this is comparable with the crusted lesions in their case, and with the fact that it is referred to as a cancerous dermatosis—that is, with a tendency to cross the border-line between benign basal-cell epithelioma and the rodent ulcer type of basal-cell growth.

Yours, etc.,

H. G. Adamson.

18 March 1952.

BOOK REVIEW.

The Pharmacopoeia of St. John's Hospital for Diseases of the Skin.*

In this edition of the St. John's Hospital Pharmacopoeia over 300 preparations are listed under the usual headings—applications, baths, capsules and so on, in alphabetical order. All the well-known local applications are included, but many of the older formulae have been modified, especially by the incorporation of emulsifying bases, chiefly the emulsifying wax and ointment of the British Pharmacopoeia. These bases increase the elegance of the preparations and facilitate their removal, but whether they enhance or diminish therapeutic activity is still a matter for investigation. Carbowaxes are used in a "penetrating" cream and ointment which are, presumably, intended to penetrate the hair-follicles of the scalp; there is also a "penetrating" lotion of sulphurated potash and zinc sulphate made on the same principle. Bentonite, familiar in American prescriptions, is used in a calamine lotion, and there are two lotions which incorporate titanium dioxide. Among remedies for internal administration most of the important sulphonamides are listed, but sulphapyridine, which many dermatologists have found so valuable in dermatitis herpetiformis, is omitted. Another omission is any high potency vitamin A preparation, though capsules each containing 4500 i.u. are included; most of the other vitamins known or thought to influence the skin and its disorders are to be found, including Calciferol tablets each of 50,000 units. Vitamin E does not seem to have found favour with London dermatologists, for no preparation of it appears. Three synthetic oestrogens, ethisterone, testosterone propionate and methyl testosterone, are included, but not ethinyl oestradiol, injectable oestrogens nor progesterone.

The titles of the prescriptions are on the whole indicative of their contents and well chosen, though the four preparations of "cremor zinci" are rather widely dissimilar in basic composition.

Where difficulties in dispensing might be encountered, brief but adequate instructions are given.

There are two useful appendices, dealing with antibiotics and antihistamines respectively, with summaries of their possible toxic effects and therapeutic indications.

A number of blank pages are interleaved for notes and additional prescriptions.

While so much treatment remains empirical, it is impossible to cater for everyone's therapeutic whims, but the compilers have succeeded in selecting a comprehensive variety of formulae, easily dispensed, and incorporating nearly all the recent advances in treatment. This book should be a great help to all engaged in dermatology, particularly to those in their earlier years of specializing. The binding seems reasonably strong, the paper and printing good, and the size convenient for the pocket.

B. C. T.

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* *The Pharmacopoeia of St. John's Hospital for Diseases of the Skin.* Compiled with the collaboration of the Medical Staff by R. T. Brain, M.D., F.R.C.P., and H. M. Tedham, M.P.S. London: The Chaseton Press, H. Williams & Son Ltd., 1951. Price 5*s*. Pp. 63.

CURRENT LITERATURE.

CLINICAL EVALUATION OF AUREOMYCIN AND CHLORAMPHENICOL IN HERPES ZOSTER. E. K. Kass, R. R. Aycock and M. Finland. (1952) *New Engl. J. Med.*, **246**, 167.

Twenty-five cases of herpes zoster were treated with aureomycin and a like number with chloramphenicol without any effect being noted. A. D. P.

INDUSTRIAL DERMATITIS DUE TO CONTACT WITH BRASS. G. E. Morris. (1952) *New Engl. J. Med.*, **246**, 366.

Five cases of dermatitis caused by brass are reported. A. D. P.

AN ADAPTATION OF LOW POWER POCKET MICROSCOPES FOR CUTANEOUS EXAMINATION. W. W. Lyon. (1951) *J. invest. Derm.*, **16**, 201.

The nett ultimate value of such a piece of apparatus as this lies in the stimulus it gives to visual observation and verbal description. The young dermatologist of to-day is always being told that the cutaneous part of his studies is of little importance and that his specialty is of significance only as a part of general medicine. Why should it be assumed that an interest in the minutiae must exclude a balanced judgment and the appreciation of wide issues? "The wisdom of the scribe cometh from opportunity of leisure." Let us hope that more of our colleagues will create the time and opportunity to construct these nice little gadgets. J. H. T. D.

DERMATOLOGIC ASPECTS OF ELECTRON MICROSCOPY. G. D. Baldridge, H. Blank and G. Rake. (1951) *J. invest. Derm.*, **16**, 281.

A comprehensive and readable account, fascinatingly illustrated. In the portrait of a spirochaete, so large that the page fails to contain it, it is surprising to note that its thickness does not exceed that of the virus particle of molluscum contagiosum. It is surprising, too, that the forces determining the shape and form of structures in the ultramicroscopic world do not appear to differ from those determining the appearance of such familiar objects as liquorice bootlaces and bits of toffee. J. H. T. D.

SIMULATION OF LUPUS ERYTHEMATOSUS PHENOMENON BY MATERIALS OF FUNGAL ORIGIN. J. R. Haserick. (1951) *J. invest. Derm.*, **16**, 211.

A sample of plasma that had given a positive L.E. cell reaction with heparinized canine bone-marrow was noticed to be cloudy, and on further examination it turned out to have been contaminated with aspergillus niger. Normal plasma contaminated by cultures of this particular organism, but not by the laboratory stock culture, also brought about the development of rosettes and an occasional L.E. cell. The literature contains a few cases of disseminated L.E. dying of pulmonary mycoses. J. H. T. D.

STUDIES ON THE ETHER-SOLUBLE SUBSTANCES ON THE HUMAN SKIN. F. Herrmann and P. H. Prose. (1951) *J. invest. Derm.*, **16**, 217.

This work confirms the observations of Butcher and Parnell that mechanical removal of the film of grease from the surface of the skin procures its replacement. It is not yet certain that sweat contains any preformed lipoid, but it has the power of emulsifying that which it encounters on the surface. At any rate the production of the sebaceous glands is enhanced by sweating, and it is thought that the action is similar to that of mechanical removal. J. H. T. D.

STUDIES ON THE LIFE CYCLE OF SPIROCHAETES. E. D. de Lamater, M. Haanes, R. H. Wiggall and D. M. Pillsbury. (1951) *J. invest. Derm.*, **16**, 231.

By means of phase-contrast microscopy it has been possible to demonstrate and to photograph spirochaetes indulging in their various processes of reproduction. J. H. T. D.

CUTANEOUS SIDE EFFECTS OF ACTH, CORTISONE AND PREGNENOLONE THERAPY. M. J. Brunner, J. M. Riddell and W. R. Best. (1951) *J. invest. Derm.*, **16**, 205.

Cushing's syndrome developed fully in a fortnight, together with a number of seborrhoeic manifestations, in a woman aged 24 who had been having no more than 20 mg. of ACTH three times a day.

Of 105 cases treated with ACTH, cortisone and pregnenolone for more than 2 weeks, 51% had skin changes—mostly pigmentation hypertrichosis and acne. Seborrhoeic dermatitis, however, occurred in only 2% of them.

The authors speculate on the possibility that these hormones modify the sebum to favour diphtheroids and pus cocci. It could equally well be argued that the androgens released into the circulation sensitize the epidermis and appendages to an unknown noxa, traces of which are always available for the production of dandruff and acne, but are only exceptionally present in sufficient quantity for the development of seborrhoeic eczema. J. H. T. D.

ELECTROPHORETIC STUDIES IN BULLOUS DISEASES. THE ELECTROPHORETIC PATTERN OF ANIMALS INJECTED WITH SERUM OR BLISTER-FLUID FROM PATIENTS WITH BULLOUS DISEASE. M. H. Berg and A. C. Curtis. (1951) *J. invest. Derm.*, **16**, 125.

Infection can alter the electrophoretic pattern in animals. Mice infected with influenza virus A have been shown to develop an additional boundary with mobility between albumen and α-globulin.

The mice injected with serum and blister fluid in the course of these studies showed no signs different from those in mice injected with rabbit-serum saline, nor did their sera show changes comparable with those occurring in the electrophoretic blood-protein pattern of human patients. J. H. T. D.

THE EFFECTS OF PENICILLIN ON CERTAIN HITHERTO INCURABLE DERMATOSES. V. H. Witten. (1951) *J. invest. Derm.*, **16**, 193.

Of 6 cases of acrodermatitis chronica atrophicans (Pick-Heixheimer) 4 improved under treatment with penicillin, directing attention once more to the possibility that treponemes play some part in its causation.

Not one of the 6 cases of Kaposi's idiopathic sarcoma were improved. J. H. T. D.

ASSAY OF HYALURONIDASE IN VARIOUS DERMATOSES. P. H. Prose and R. L. Baer. (1951) *J. invest. Derm.*, **16**, 169.

Exhaustive attempts to demonstrate the presence of hyaluronidase in extracts of normal and diseased skin, human and guinea-pig, failed in every case but 3. One of these was a case of dermatitis herpetiformis, another undiagnosed, the third one of benzocaine sensitivity. In this last case the tests were negative until the material had been 24 hours in the icebox. J. H. T. D.

EVIDENCE OF ADRENO-CORTICAL STIMULATION BY AUTOHAEMOTHERAPY. G. C. Sauer. (1951) *J. invest. Derm.*, **16**, 177.

The average falls in circulating eosinophils 3 and 6 hours after an intramuscular injection of 10 c.c. autogenous whole blood were 41% (± 21%) and 43% (± 21%) respectively. After 0·5 mg. of adrenalin they were 50% (±17%) and 52% (±18%). When blood was withdrawn from the vein as usual but saline injected into the buttock instead of it, the fall was only 8% (±17%) at 3 hours, and at 6 hours in 3 of the cases there was a rise of 10% (± 32%). This is the first time any demonstrable change has been recorded as the effect of autohaemotherapy. J. H. T. D.

HEREDITARY LEUCONYCHIA TOTALIS. W. T. Kruse, E. P. Cawley and C. W. Cotterman. (1951) *J. invest. Derm.*, **17**, 135.

Propositus, ordinarily a legal term designating the person from whom a line of descent is reckoned, is here used for "individual (patient) through whom information concerning the rest of the family is obtained." The paper contains a rather disorderly mass of information, historical and genetic, about the condition. J. H. T. D.

OCCURRENCE OF CONTACT DERMATITIS FROM OIL-SOLUBLE GASOLINE DYES. J. H. Lamb and E. S. Lain. (1951) *J. invest. Derm.*, **17**, 141.

Doubtless petrol in the U.S.A. is dyed to make it look pretty, rather than for the purpose of detecting surreptitious users of "miners' sweat." These dyes belong to the same group as scarlet red, and they have a chemical affinity with procaine and the sulphonamides. J. H. T. D.

OBSERVATIONS ON TREATMENT MECHANISMS IN PSORIASIS, WITH SPECIAL REFERENCE TO TERRAMYCIN. J. H. Stokes and W. T. Ford. (1951) *J. invest. Derm.*, **17**, 171.

In interpreting the favourable response of two inveterate psoriatics to treatment with various remedies—including terramycin by the mouth—in the course of a 5-year observation, the authors confess to the difficulties imposed by the psychosomatic factors of which they are very well aware. ". . . Each new approach, each new and reassuring medical attendant, has, for the moment, the cards stacked in his favour. Then as his successive efforts and devices fail to produce the hoped-for cure, the patient loses heart and ground, only to regain it at the hands of a new enthusiasm or a quack formula. . . . Observation of the colour play of the lesions is psoriatics and the quieting effect of reassurance on a livid and pruritic eruption. . . ."

Nevertheless terramycin, which is well enough tolerated, seems to have some value, perhaps in suppressing the virus end of the virus-pyogen sequence so often associated with exacerbations.

J. H. T. D.

THE USE OF SILICOTE AS A SKIN PROTECTANT. J. R. Talbot, J. K. MacGregor and F. W. Crowe. (1951) *J. invest. Derm.*, **17**, 125.

Silicote is a proprietary ointment of silicone oils in soft paraffin. Silicones are the silicon analogues of the hydrocarbons. The waxes are already known to us as motor car polishes. They are also widely used instead of animal fat to prevent bread sticking to the pan in which it is baked. They are non-toxic, non-irritant and waterproof. Silicote will protect the skin from the "sequelae" (effects) of maceration and irritation by colostomy, wet nappies, etc.

J. H. T. D.

USE OF GASTRIC MUCIN IN EXPERIMENTAL INFECTIONS WITH THE DERMAL VIRUSES. M. J. Lipnik and G. D. Baldridge. (1951) *J. invest. Derm.*, **17**, 127.

Gastric mucin (synthetic) does not increase the susceptibility of chorioallantoic membrane to vaccinia or herpes virus, nor does it make possible infection with molluscum contagiosum or wart viruses.

J. H. T. D.

A RAPID AND SIMPLE METHOD FOR OBTAINING PUNCH BIOPSIES WITHOUT ANAESTHESIA. F. Urbach and W. B. Shelley. (1951) *J. invest. Derm.*, **17**, 131.

For obtaining pieces of skin of constant superficial area one could of course employ a rubber stamp to delineate the piece to be excised; but where it is important to have constant volume as well, and for biochemical investigation in general, the motor-driven rotary punch described here is indispensable. For diagnostic biopsy the instrument might even be useful to those who choose to leave the job to the junior resident.

J. H. T. D.

INTERPRETATION OF SERUM REACTIONS IN LATE SYPHILIS. C. P. Heywood. (1952) *Brit. J. vener. Dis.*, **28**, 3.

This provocative paper was followed by a stimulating discussion. The author summarizes as follows: (i) A positive serological reaction, with appropriate safeguards, means that the patient has been infected with syphilis at some time in his life. (ii) The positive serological reaction is nevertheless not a diagnosis but a stimulus to further investigation. (iii) The behaviour of the S.T.S. under treatment is not a guide to treatment, but merely an indication of the probable duration of infection. (iv) In late syphilis it is not to be expected that the S.T.S. will become negative after treatment. (v) The aim of treatment in late syphilis is not to produce a negative S.T.S.; attempts to reverse a positive S.T.S. to negative by treatment are doomed to failure because the attempt is misconceived.

W. G. A.

A NOTE ON THE PATTERNS OF QUANTITATIVE SEROLOGICAL TESTS IN LATE SYPHILIS. A. Redmond, C. S. Nicol and R. A. Shooter. (1952) *Brit. J. vener. Dis.*, **28**, 13.

Monthly tests were made for a minimum of 6 months and in many instances for 2 years or more in a series of 83 cases, and the results have been charted in graphic form. There was no significant difference in the serological patterns of the acquired and congenital types of late syphilis, nor did the sex of the patient apparently have any effect on the pattern. It seems reasonable to suggest that the reagin level may fluctuate in untreated cases, and that there may be considerable danger in accepting a single negative serum test as excluding infection in any patient suspected of having late acquired or late congenital syphilis.

W. G. A.

COMPARATIVE SERUM TESTS WITH CARDIOLIPIN AND CRUDE HEART EXTRACT WASSERMANN ANTIGENS. I. N. Orpwood Price and A. E. Wilkinson. (1952) *Brit. J. vener. Dis.*, 28, 16.

Parallel tests were made on 2876 sera by the Whitechapel Clinic Wassermann technique, using cardiolipin and crude heart extract antigens at their optimal titres. Cardiolipin antigen was found to be more sensitive than crude heart extract antigen when used to test sera from treated syphilitic patients, but sufficient data have not yet been collected regarding the performance of the two antigens with sera from patients with primary syphilis. The cardiolipin antigen gave more non-specific reactions with routine sera than the crude heart extract antigen.

W. G. A.

TWO CASES OF GUMMATOUS ULCERATION TREATED WITH TERRAMYCIN. R. R. Willcox. (1952) *Brit. J. vener. Dis.*, 28, 20.

Two male patients, aged 32 and 63, with ulceration of the legs were treated with terramycin. The younger responded favourably to small doses, although exhibiting a mild paraesthesia and a scaly rash on the face, and the ulcer healed after a total dose of 81g. given over 98 days. The older man did not respond so well and had relapses which were unresponsive to further terramycin. The lesions first filled up from the bottom before the edges began to approximate. This method of healing has also been observed in cases treated with aureomycin and chloramphenicol. (The reviewer is of the opinion that this method of treatment has nothing to recommend it in preference to the older and proven methods, and considers that it is just another example of modern therapy run riot.) W. G. A.

GRANULOMATOUS ULCER OF THE NOSE TREATED WITH CHLORAMPHENICOL. I. B. Sneddon and J. Colquhoun. (1952) *Brit. med. J.*, **1**, 298.

A case of progressive granulomatous ulceration of the nose and face is described. From the lesion a staphylococcus was eventually obtained in pure culture. The extension of the disease process was arrested with aureomycin, but the staphylococcus sensitive to the drug *in vitro* could still be recovered from the lesion. Chloramphenicol produced a gradual but complete recovery with coincident disappearance of the staphylococcus from the ulcer. It is suggested that the condition is an unusual non-specific response to staphylococcal infection, and that chloramphenicol may be better than aureomycin for staphylococcal infections. B. A. T.

INCONTINENTIA PIGMENTI. Alfred White Franklin. (1952) *Brit. med. J.*, **1**, 75.

The patient, a female child, at 2 months began to have feverish attacks with swelling and redness of the lower limbs and chest. As the swelling subsided pigmented areas were left which, around the trunk, showed many parallel, transverse, narrow strips. Sections showed a large number of melanophores containing closely-packed melanin granules situated almost entirely in the superficial corium. In 1925 Bardach gave the first account of the condition and regarded it as a form of systematized naevus. Next year Bloch demonstrated another case and regarded it as "autochthonous tattooing" produced by melanin pigment leaving the basal layer and descending into the corium. Siemens in 1929 described the condition as an idiopathic example of degenerative melanosis. The conclusion is that the familial character and the association with other recognized congenital ectodermal defects support the view that this is a congenital abnormality of the skin.

A summary is given of 29 other cases from the literature. B. A. T.

BULLOUS LESIONS IN LEUKAEMIA. Ronald Scutt. (1952) *Brit. med. J.*, **1**, 139.

A woman, aged 65, had a bullous eruption on the arms and soles and also a bluish infiltrated erythematous eruption on the face. There were, in addition, purpuric and erythema multiforme-like lesions, cellulitis and the specific papular infiltrate of leukaemia. B. A. T.

CAPILLARITIS: AN UNUSUAL CASE. A. Bergamasco. (1951) *Arch. ital. Derm.*, **24**, 186.

A patient with chronic, localized, asymmetrical haemorrhagic neuro-capillaritis and secondary regional periarteritis. The author records this rather unusual case in which the area of one shoulder was affected by a painful capillaritis. Histologically there was not only obliteration of the small vessels of the dermis by endothelial hyperplasia, but perineuritis and alterations in the nerve fibrils and nuclei of the nerve sheath. There was no evidence of polyarteritis nodosa (though there is no record of the sedimentation rate). There was a strongly positive reaction to tuberculin.

Touraine's detailed classification of capillaritis is summarized, but it is doubtful whether this case fits into the known main groups. D. S. W.

TETANUS AND VARICOSE LESIONS OF THE LIMBS. F. Brillanti. (1951) *Arch. ital. Derm.*, **20**, 217.

There have only been a few sporadic reported cases of the acquisition of tetanus through varicose ulcers. Out of 92 cases the author has collected 5 in which the site of invasion was a varicose ulcer. Bacteriological proof was obtained. D. S. W.

CYTOLOGY OF THE MALPIGHIAN LAYER IN BULLOUS LESIONS OF PEMPHIGUS. V. Musumeci. (1951) *G. ital. Derm. Sif.*, **92**, 369.

Pursuing the question of cytology changes shown to occur in pemphigus by Tzanck, the author lays stress on the alteration in cellular size and shape and in nuclear form, and emphasizes the multinuclear appearances often found. He considers that these changes, which are associated with abnormal cellular multiplication and growth, suggest a virus infection as the cause of pemphigus vulgaris. There are numerous good microphotographs, showing the variety of changes that occur. D. S. W.

ADRENAL CORTICAL HORMONES IN DERMATOLOGY. D. Huriez. (1951) *Dermatologia*, **2**, 290.

A general discussion on the use of cortisone and ACTH in a wide variety of dermatological conditions. The author's conclusions are similar to those found by others, namely, that "the effects are sometimes spectacular but rarely lasting." He found that no more than a third of the patients achieved lasting and striking results, and that in a similar number the effect was transitory or ephemeral. In one-fifth of the total number there was no beneficial effect at all. He thinks that cortisone is better than ACTH in the majority of cases, being less spectacular in effect but more easily controlled. Cases of infantile eczema responded fairly well, but he noticed the ease with which infectious complications seemed to occur during the treatment. In adult eczema, chronic urticaria and psoriasis the effect of the drug was not impressive. D. S. W.

A POSSIBLE MECHANISM OF THE ACTION OF VITAMIN D_2 IN THE THERAPY OF PSORIASIS. A. Maggiora. (1951) *Arch. ital. Derm.*, **24**, 431.

Based on cases of psoriasis treated either with vitamin D_2 or with D.O.C.A. and ascorbic acid. The former was the more successful. The author comments on the local fluid retention and capillary permeability in this disease, and discusses the rather tenuous theoretical biochemical observations that have been made, particularly in relation to the steroid metabolism. He thinks that a member of the steroid group may be the direct agent in the disease, and that the modification caused in his cases by vitamin D_2 would fit in with this theory. D. S. W.

THE ROLE OF PSYCHOLOGICAL FACTORS IN THE AETIOLOGY OF SOME DERMATOSES. P. de Graciansky and E. Stern. (1952) *Ann. Derm. Syph.*, **79**, 5.

This is an uncontrolled series of observations on the frequency of various maladjustments in childhood, sex relations, etc., on certain common dermatoses. In eczema they stress the frequency of frustrations with lack of affection in infancy. Similar though less severe upsets were found in cases of pruritus. In general the observations have little statistical value. F. F. H.

THE INFLUENCE OF CERTAIN VITAMINS ON THE "IN VITRO" DEVELOPMENT OF SOME DERMATOPHYTES. X. Vilanova and M. Casanovas. (1952) *Ann. Derm. Syph.*, **79**, 25.

From a series of observations the authors conclude that para-aminobenzoic acid inhibits the growth of fungi, whilst pyridoxine, thiamine, calcium pantothenate and, above all, meso-inositol activate their growth. F. F. H.

TWO NEW CASES OF CUTANEOUS VACCINIFORM DIPHTHERIA. P. le Coulant and Sourreil. (1952) *Ann. Derm. Syph.*, **79**, 48.

Two children are described who showed an impetiginous appearance which was unusually haemorrhagic. The lesions began with little umbilicated blisters grouped in patches more or less confluent resembling somewhat Kaposi's varicelliform eruption. The condition was shown to be due to diphtheria bacilli and one patient died. F. F. H.

NEURO-RECURRENCE AFTER PENICILLIN THERAPY OF SECONDARY SYPHILIS. S. M. Laird. (1951) *Urol. cutan. Rev.*, 55, 475.

Neuro-recurrence is reported in a patient with advanced secondary syphilis treated with 2·5 mega-units of penicillin (amorphous). The writer comments that this dose is now recognized as inadequate, but that it is rare even with such dosage to get neuro-recurrence. C. H. W.

SELECTIVE CHEMICAL EPILATION IN THE TREATMENT OF TINEA CAPITIS AS CONTRASTED WITH THE DIFFUSE X-RAY EPILATION. Tibor Benedek. (1951) *Urol. cutan. Rev.*, 55, 539.

This well-documented paper deserves wide attention from dermatologists and public health officers. After reviewing the new "cures" for scalp ringworm and his own earlier observations, he argues that the search for drugs that are fungicidal or fungistatic *in vitro* has proved a waste of time, and that the "good" results were little better than might be accounted for by spontaneous healing, which undoubtedly can and does occur. His attention therefore has been directed towards finding an agent that would selectively epilate the infected hairs. This alone would ensure a cure. Moreover it would have the great advantage over X-ray epilation in that it would leave the healthy hairs *in situ*. Such an agent should penetrate to the depth of the follicle, should be devoid of any irritating or sensitizing property, and should not be absorbed into the circulation, or if absorbed be non-toxic. The formula he evolved was copper sulphate 5%, chloral hydrate 5%, glycerin 78%, sodium lauryl sulphate 1%, aq. destillat. 11%. The author claims that this solution penetrates to the depth of the follicle and into the hair-shaft, and attacks selectively only the infected hairs. After 5 to 6 applications the infected hair is "completely loosened and can be lifted *in toto* out of the infected follicle." The infected hairs can be removed with adhesive tape, or merely by brushing out with a soft brush, in two to four weeks. Examination under Wood's light is carried out for six weeks after the fluorescent hairs have disappeared.

Of the 96 cases treated 73 were followed successfully to their conclusion; the remaining 23 could not be traced or followed.

The author is fully aware that success will depend on the degree of care taken by the mother in carrying out the treatment—an element of uncertainty avoided by X-ray epilation; but the method deserves careful trial. The paper contains much valuable information, and well repays study by those who have to cope with epidemics of scalp ringworm. C. H. W.

NEW STUDIES EXPERIMENTAL AND CLINICAL ON PEMPHIGUS. David I. Macht. (1951) *Urol. Cutan. Rev.*, 55, 550.

The seedlings of *Lupinus albus* show inhibition of root growth when immersed in 1% solutions of certain chemicals or of certain pathological human sera (Pels-Macht test). The serum from pemphigus patients yields a higher inhibiting power than any other disease. The c.s.f. gives similar results. This toxicity can be removed or neutralized by X-ray irradiation of the serum (Pels-Ostro test). Certain wave-lengths are more effective than others: filtration through 2 mm. Cu and 1 mm. Al produces maximum detoxication.

The tests used for diagnosis gave consistent results. These patients were irradiated in an attempt to "detoxicate" them—with partial, though often temporary, success. The "toxin" is confined almost entirely to the globulin fraction of the serum. Suprarenal cortex extract, ACTH and Cortisone in low concentrations neutralize the toxicity of the serum *in vitro*. Blood serum from pemphigus patients treated with ACTH or Cortisone showed detoxication which ran parallel with clinical improvement.

The author concludes that pemphigus is a systemic disease caused by a toxin, possibly a virus, which profoundly affects the whole body.

He gives no clinical criterion for distinguishing pemphigus from dermatitis herpetiformis, unless it be that most pemphigus cases die and dermatitis herpetiformis usually responds to sulphapyridine. He does not mention Civatte, Tzanck, Rooke and Whimster. C. H. W.

MODERN TREATMENT OF VASCULAR NAEVI. Jerome M. Greenhouse. (1951) *Urol. cutan. Rev.*, 55, 559.

Five different types are discussed—port-wine, spider, lymphatic, strawberry and cavernous. The author does not accept Lister's findings that strawberry naevi need no treatment because they undergo spontaneous involution. He states that spontaneous recovery may be slow, incomplete, may leave scarring; and haemorrhage, ulceration and infection may supervene; moreover it is not possible "to predict which lesions will disappear." The treatments he used are orthodox.

C. H. W.

COMPARATIVE STUDY OF HISTOLOGY AND CYTOLOGY IN VESICULATING ERUPTIONS. L. H. Winer and Carl E. Lipschultz. (1952) *Arch. Derm. Syph., Chicago*, **65**, 270.

This study is not confined to pemphigus and dermatitis herpetiformis, but extends to variola, varicella and the herpes group, thus dermatitis eruptions and the eczemas. Perhaps the most interesting feature is the discussion following the paper, which illustrates the differences in clinical labels used in various parts of the world which makes their correlation with histological and cytological findings so difficult. J. K.

NATURAL STEROID COMPLEX: EVALUATION OF USE IN COLLAGEN DISEASES AND CHRONIC DERMATOSES. Werner W. Duemling and Milton Millman. (1952) *Arch. Derm. Syph., Chicago*, **65**, 327.

The complex used ("Marisone") was obtained from pregnant mares' urine; it is non-toxic and produced a minimum of side effects even after prolonged administration of large doses. In all 22 patients were treated with good effect in pemphigus, contact dermatitis and keratoderma climactericum; relapse after withdrawal in psoriasis, neuro-dermatitis, atopic dermatitis and light sensitization; and no effect in chronic discoid lupus erythematosus, seborrhoeic dermatitis and urticaria. J. K.

LOCAL DEPILATORY ACTION OF SOME UNSATURATED COMPOUNDS. Peter Flesch and Madison Hunt. (1952) *Arch. Derm. Syph., Chicago*, **65**, 261.

The authors tested several unrelated synthetic and natural unsaturated compounds for their local depilatory effect on laboratory animals; the action in each case was reversible. Certain synthetic compounds with the allyl grouping produced reversible baldness accompanied by marked inflammatory epidermal changes; these compounds are lethal to laboratory animals when applied locally in suitable dosage. Squalene, a natural component of human sebum, produced a similar hair loss without visible inflammation of the epidermis. Similar effects could be obtained by applying human sebum. Repeated applications of vitamin A also produced reversible baldness. The cause of the loss of hair is not clear, for while allyl derivatives and squalene inactivate -SH groups *in vitro* vitamin A does not.

It is suggested that sebum plays an important role in disturbances of hair growth and keratinization. J. K.

LUPUS ERYTHEMATOSUS: TREATMENT BY COMBINED USE OF MASSIVE AMOUNTS OF CALCIUM PANTOTHENATE OR PANTHENOL WITH SYNTHETIC VITAMIN E. Ashton L. Welsh. (1952) *Arch. Derm. Syph., Chicago*, **65**, 137.

This report is based on 32 patients with lupus erythematosus (25 chronic discoid, 6 subacute disseminated) treated with large doses of Panthenol (4 g. daily increasing to 10–12 g.) or calcium pantothenate (in similar dosage) with vitamin E (ephynal acetate, 400 mg. increased to 1000 mg. daily) over long periods (2–36 months). "Very favourable results were obtained," with no harmful effects apart from transient nausea or other slight gastric upset. J. K.

PEMPHIGUS VULGARIS: A CLINICOPATHOLOGICAL STUDY. William Director. (1952) *Arch. Derm. Syph., Chicago*, **65**, 155.

This article is based on a study of 33 cases of pemphigus vulgaris. The author considers that this disease (pemphigus foliaceus and pemphigus vegetans are excluded) has the following clinical features: it is invariably fatal (with a possible reservation that cortisone and ACTH may be effective in some cases); in the large majority of patients the duration of the disease is under one year, in a minority it may last over three years with or without remissions; mucous membrane lesions occur in the vast majority of patients; itching is not a prominent or important symptom; the disease seldom occurs before the age of 30. The author has come to the conclusion that the bulla of pemphigus vulgaris is primarily intraepidermal, whereas those of dermatitis herpetiformis, erythema bullosum and epidermolysis bullosa are subepidermal and cannot in all cases be differentiated histologically. The fresh bulla of pemphigus vulgaris shows acantholysis between the basal and prickle-cell layers, but in places the cleavage may be more superficial, leaving a few rows of prickle cells attached to the basal layer. Single prickle cells or clumps may float free in the bulla, but the degenerative changes in these cells are not considered specific. As the bulla ages oedema and inflammatory changes may loosen the basal cells from the floor of the bulla giving the appearance of a subepidermal bulla. Regeneration tends to start in the centre of the bulla, whereas in the true subepidermal bulla it begins at the periphery. J. K.

LUPUS ERYTHEMATOSUS ASSOCIATED WITH PREGNANCY AND MENOPAUSE. Francis A. Ellis and Eugene S. Bereston. (1952) *Arch. Derm. Syph., Chicago*, **65**, 170.

The authors conclude that acute disseminated lupus erythematosus accompanying pregnancy may result in 30% foetal mortality, but the outlook for the mother is unchanged by pregnancy (25% deaths in 56 patients—a remarkably low figure). Pregnancy has little or no effect on the course of subacute lupus erythematosus in the mother but leads to a foetal mortality of 46%. In pregnancy accompanied by chronic discoid lupus erythematosus no consistent effects were observed on mother or child. The menopause does not alter the prognosis for any form of the disease.

These conclusions were reached as a result of a questionary sent to 280 dermatologists, but the chart of the result is difficult to correlate with the questions asked. J. K.

CORTISONE ACETATE IN SKIN DISEASE: LOCAL EFFECT IN THE SKIN FROM TOPICAL APPLICATION AND LOCAL INJECTION. Leon Goldman, Robert G. Thompson and E. Randolph Trice. (1952) *Arch. Derm. Syph., Chicago*, **65**, 177.

Topical application in a variety of diseases produced no significant results in 114 patients, and while "hypospray" injection produced a few striking results these were uncontrolled and conclusions cannot be made from them. J. K.

EXPERIENCE WITH A NEW ANTIPRURITIC AGENT: PRELIMINARY REPORT ON 1-(BETA-DIMETHYLAMINOETHOXY)-3-*n*-BUTYLISOQUINOLINE MONOHYDROCHLORIDE. Edward F. Corson, Herbert A. Luscombe and Henry B. Decker. (1952) *Arch. Derm. Syph., Chicago*, **65**, 187.

This drug, a local anaesthetic, was used as an antipruritic in 128 cases with improvement or complete relief in 84·4%. Any dermatosis accompanied by itching was treated, including pruritus, neurodermatitis, eczema and dermatitis, and the most satisfactory application was 0·5% of the drug in a non-greasy base. J. K.

EXPERIMENTAL STAPHYLOCOCCAL FOLLICULITIS: COMMENT ON ITS POSSIBLE RELATIONSHIP TO ACNE. J. P. O'Brien. (1952) *Arch. Derm. Syph., Chicago*, **65**, 206.

The author amplifies his previous report on the poral lesions produced by experimental incubation of staphylococci on the skin, with special reference to the pilo-sebaceous follicle. He draws attention to the ring or tube of concentric lamellated keratin surrounding the follicular opening; infection produced parakeratosis with obstruction at this level; sections of early lesions showed staphylococci in the space between the hair and this keratin sheath. Suppuration was also present. From the somewhat similar histological picture in acne the author concludes that staphylococci may play a larger role in the causation of acne than is at present generally believed. J. K.

THE PATHOLOGY OF GENERALIZED LUPUS ERYTHEMATOSUS. Paul Klemperer. (1952) *Arch. belg. Derm. Syph.*, **7**, 241.

This is an excellent summary of our present knowledge of the pathology of acute disseminated lupus erythematosus by one who has taken no mean part in its investigation.

Characteristic findings are the lupus erythematosus cell, haematoxylin-staining bodies and "wire loop" lesions in the kidneys. Lesions in skin, heart, blood vessels, serous membranes and joints can all be reduced to a common denominator of alteration in connective tisue; there is a profound change in the colloidal state which may, however, happen without visible alteration in structure. Such alterations are not the cause but result from the morbid state.

Haematoxylin-staining bodies and the inclusion bodies in lupus erythematosus cells are identical and contain desoxyribose nucleic acid (DNA) in a state of depolymerization. Recent studies of glomerular and vascular lesions have shown that probably this decomposition can proceed further and that the hyaline thrombi in the blood vessels represent the remains of disintegrated nucleoprotein.

There is evidence that nucleoproteins liberated at different stages of decomposition can circulate freely in the blood of lupus erythematosus patients. It is not possible yet to say if this decomposition is started by a factor acting on DNA or on the protein fraction of nucleoproteins. The fact that there is a factor in the gamma globulin fraction of affected serum capable of producing lupus erythematosus cells from normal bone marrow or blood cells is of great importance.

It is not yet possible to present a completely satisfactory theory of the pathogenesis of this disease. The above specific findings, not seen in any allergic disease, appear to rule out hyper

sensitiveness as a cause, and the theory of toxaemia (tuberculous or otherwise) has also been discarded. On the other hand we have now well established absolute criteria for both ante- and post-mortem diagnosis of this condition and an explanation of its protean manifestations.
J. K.

ALLERGIC DERMATITIS IN GUINEA-PIGS: ITS INHIBITION BY CORTISONE AND PHENERGAN. J.-P. Duesberg. (1952) *Arch. belg. Derm. Syph.*, **7**, 258.

After a lengthy review of clinical and experimental human cutaneous allergy and its treatment the author describes his experiments with guinea-pigs. Daily applications for 8 days of 10% paraphenylamine diamine in vaseline on an epilated area were made to 35 guinea-pigs. Of these, 7 had a diet rich in vitamin C and were not sensitized; the remainder, whose diet contained less vitamin C were mostly found on the 21st day to be sensitized. These were divided into 3 groups. The first received phenergan from the 19th to the 23rd day (20 mg. per kilo per 24 hours), the second cortisone for a similar period (10 mg. per kilo per 24 hours); the third was used as a control. On the 21st day each received a further application of 10% paraphenylamine diamine on the treated area. The controls all showed a strong reaction in 24 hours, the phenergan-treated animals much less and the cortisone-treated hardly any reaction. J. K.

CRAZY-PAVEMENT NAEVUS OF THE LUMBOSACRAL REGION IN PRINGLE'S DISEASE. H. Walther. (1951) *Derm. Wschr.*, **124**, 940.

The author discusses adenoma sebaceum in the literature and lists the very varied manifestations of Pringle's syndrome on sites other than the face, citing the example described by Gottron of an isolated crazy-pavement naevus of the lumbosacral region, the only expression in the skin of the syndrome accompanied by sclerosis of the brain and epilepsy. One patient of his own with Pringle's syndrome had a crazy-pavement naevus of the sacrum, multiple symmetrical naevi of the face and poor intelligence. Photographic and microphotographic illustrations accompany the text. M. S. S.

CLINICAL EXPERIENCES WITH INTERNAL AND INTRAMUSCULAR ADMINISTRATION OF BIOTIN. W. Kiessling. (1952) *Derm. Wschr.*, **124**, 1246.

In experimenting with Biotin (vitamin H) the authors treated three groups of patients: (1) seborrhoeic dermatitis, Leiner's disease and seborrhoeic eczema, (2) endogenous allergic eczema, (3) acne vulgaris. There were 55 patients in all and more than half were children. Seborrhoeic dermatitis (Leiner's disease) responded very well in 2 infants; seborrhoeic eczema and true endogenous eczema not appreciably; acne vulgaris appeared to benefit in 2 of the 4 patients treated. Biotin (Roche) was given as tablets or 5 mg. ampoules in a daily dose of 5–30 mg.
M. S. S.

ON THE POSSIBILITY OF A FUNCTIONAL DIFFERENTIAL DIAGNOSIS IN DE- AND APIGMENTATION OF THE SKIN. K. Halter. (1952) *Derm. Wschr.*, **125**, 1.

It should be possible in most instances to differentiate between vitiligo and partial albinism (naevus depigmentosus) from a consideration of the clinical picture and history: the author tabulates the points in differential diagnosis; but occasionally difficulty is encountered, and the author tries by the sweating test to find an additional aid in differential diagnosis. One patient with partial albinism with Sutton's phenomenon and 3 others diagnosed as partial albinism showed no deviation from the normal sweating reaction; 10 vitiligo patients showed an abnormal sweating reaction over the patches, either diminished, delayed or increased (in 2 patients, with pilocarpine). The author preferred the use of warmth to pilocarpine as the latter was more variable in its effect. M. S. S.

IS EOSINOPHILIA A WARNING SYMPTOM IN NEO-ARSOLUIN THERAPY? W. Höfer. (1952) *Derm. Wschr.*, **125**, 121.

In using a new arsenical preparation to treat syphilis the author likes to have four blood-counts: one initially, one about the ninth day of treatment, a third in the middle of a course, and a fourth at the end. In his opinion the development of an eosinophilia around 12–13% during treatment is a warning of probable allergic arsenical intolerance to follow and an indication for the greatest caution in treatment; it suggests the advisability of frequent blood counts as controls. Of 35 patients who developed an eosinophilia of 11–15% during treatment, 65% later developed signs of intolerance; with an eosinophilia of 16–20%, 60%; and of over 20%, 100%. In the

author's series 48 developed Milian's ninth day erythema and 38 of these had an eosinophilia. Of patients with an eosinophilia of over 11%, 50% became intolerant, and it was found in particular that an eosinophilia following Milian's erythema was definite warning of trouble to follow. The author described in detail the clinical course of three patients who developed arsenical erythrodermia and a very high eosinophilia. With regression of skin changes the eosinophilia returned to normal, showing that the count can be used as a prognostic sign. Of the 741 luetic patients treated with neo-arsoluin 20% (149) developed an eosinophilia—not to be regarded as an unduly high percentage, since almost every patient had four blood counts. M. S. S.

EPIDEMIOLOGY OF MICROSPOROSIS IN THE HEIDELBERG DISTRICT AND A NEW TREATMENT FOR MICROSPOROSIS. W. Kiessling. (1952) *Derm. Wschr.*, **125**, 145.

As a new treatment for microsporon infection of the scalp the author used Mixal (triphenyldodecylphosphonium bromide) 1, benzyl alcohol 10, benzyl benzoate 10, triethanolamine 50, polyglycol to 100 rubbed into the whole scalp twice daily, but first the hair is depilated with barium sulphide (bar. sulphurat. 30, zinc. oxidat. crud., talc. āā ad 100, to which water is added to form a paste. The scalp is washed and examined weekly.) The paste is thickly applied to the cropped scalp and left on for 3–5 minutes. The scalp is then washed in running water. The depilation is repeated every 2–3 weeks. In many children the 1% Mixal gives rise to a more or less severe inflammatory reaction. After an application the scalp should be bandaged and the ears protected with a smear of zinc ointment. Should the by no means altogether undesirable inflammatory reaction occur, it must be soothed ; later, treatment can be continued. Treatment is continued for 4 weeks after disappearance of fluorescence and negative microscopic findings. Of 51 children treated, 46 (90%) responded to this treatment and remained well. The average treatment time in 41 was 11 weeks ; 5 others relapsed but responded to renewed treatment. M. S. S.

SO-CALLED "PSEUDO-RECURRENCE" AFTER CHAOUL CONTACT X-RAY THERAPY WITH SPECIAL REFERENCE TO HISTOLOGY. W. Dölcher and H. Weybrecht. (1952) *Derm. Wschr.*, **125**, 153.

Out of 366 skin carcinomas treated with contact X-ray therapy (Chaoul), 4 pseudo-recurrences appeared within 3–5 weeks after the completion of the treatment usually consisting of daily doses of 300–600 r (50 kv. 6 mA FSD 1·5 cm.–3 cm.) up to a total of 4000–4200 r.

Photographs and microphotographs illustrate the text. The pseudo-recurrence consisted of an elevated warty rampart up to 5 mm. wide surrounding an ulcer and surrounded by an inflamed area. The warty area corresponded to the rim of the applicator. The histology is described in detail, and consisted of warty hyperplasia of the epidermis with an inflammatory reaction, oedema and cellular infiltration of the dermis. This all regressed spontaneously and completely in the course of 5–10 weeks. M. S. S.

INDUCTION OF THE LUPUS ERYTHEMATODES CELL PHENOMENON BY MEANS OF URINE. G. W. Korting and R. Schmitz. (1952) *Derm. Wschr.*, **125**, 174.

The urine of a patient with subacute lupus erythematosus, pyrexia, swelling of joints, albuminuria, haematuria and cylindruria was found to induce the lupus erythematosus phenomenon when added to leucocytes from a sound person. The authors consider the massive proteinuria (16% Esbach) to be responsible, with excretion of the lupus erythematosus factor linked to the globulin fraction. In support of their hypothesis they cite two other patients with subacute lupus erythematosus but no albuminuria whose serum induced the lupus erythematosus phenomenon, but not the urine. M. S. S.

CLINICAL EXPERIENCES WITH ICHTHOGEL, A WATER SOLUBLE FAT-FREE ICHTHYOL JELLY, IN VARIOUS DERMATOSES. H. Kock. (1952) *Derm. Wschr.*, **125**, 265.

Ichthogel is an autogenous oil-in-water emulsion which has the advantage of being fat-free readily washed off, and can be applied as a thin, rapidly drying elastic film which does not stain (it can be covered with a layer of powder if desired) ; no dressings are necessary, and it is useful in hairy areas. In addition to its antibacterial use in infected seborrhoeic affections, folliculitis, infected eczema, etc., its antipruritic effect is useful, and the author uses it successfully in neurodermatitis, perniosis, rosacea (combined with oral ichthyol), and as a mild application in psoriasis. Although fat-free, degreasing and cooling it has the advantage of being not too drying, and is not likely to give rise to sensitivity. M. S. S.